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.

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. For Licensed modes, the device state index(DSI) on the device UI was monitored to determine the triggering state.
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 was 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

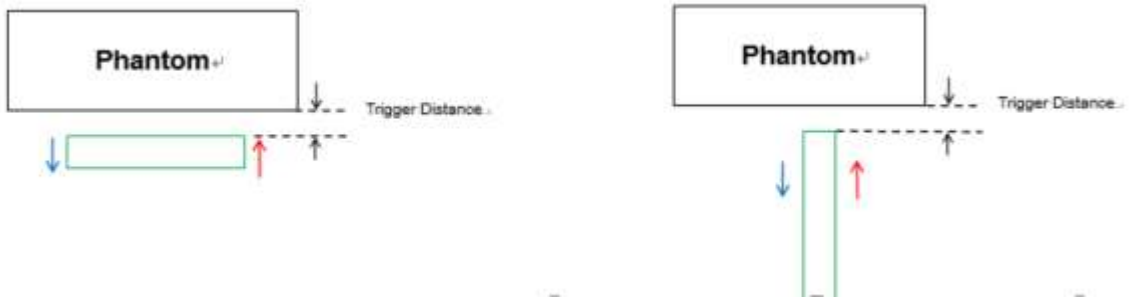
1. Power Reduction Verification for Main 1 Ant

This device utilizes a power reduction mechanism for some wireless modes under some conditions when the device is being used in close proximity to the user's hand for Main1 Ant
FCC KDB Publication 616217D04v01r02 section 6 was used as a guideline for selection SAR test distances for this device when being used in Proximity use conditions.

Mechanism(s)	Mode/Band	Device State Index	
		Un-triggered (Max Power)	Triggered (Reduced Power)
Grip	UMTS Band 5	DSI 0	DSI 1
Grip	UMTS Band 4	DSI 0	DSI 1
Grip	UMTS Band 2	DSI 0	DSI 1
Grip	LTE Band 2	DSI 0	DSI 1
Grip	LTE Band 4	DSI 0	DSI 1
Grip	LTE Band 5	DSI 0	DSI 1
Grip	LTE Band 7	DSI 0	DSI 1
Grip	LTE Band 12	DSI 0	DSI 1
Grip	LTE Band 13	DSI 0	DSI 1
Grip	LTE Band 25	DSI 0	DSI 1
Grip	LTE Band 26	DSI 0	DSI 1
Grip	LTE Band 41	DSI 0	DSI 1
Grip	LTE Band 41(HPUE)	DSI 0	DSI 1
Grip	LTE Band 66	DSI 0	DSI 1
Grip	LTE Band 71	DSI 0	DSI 1
Grip	N2	DSI 0	DSI 1
Grip	N5	DSI 0	DSI 1
Grip	N25	DSI 0	DSI 1
Grip	N41	DSI 0	DSI 1
Grip	N41(HPUE)	DSI 0	DSI 1
Grip	N66	DSI 0	DSI 1
Grip	N71	DSI 0	DSI 1

Note: This device uses different Device State Indices(DSI) to configure different time averaged power level based on certain exposure scenarios. For this model, DSI=1 represents the case when the grip sensor is active, and DSI=0 represents the case where the device cannot detect the use condition.

1.2 Proximity sensor triggering Distance Verification.



Proximity Sensor Trigger Distance Assessment KDB 616217 D04 §6.2 (Rear / Right / Top 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 Right Side		Trigger distance Right Corner Side		Trigger distance -Top	
	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]	Moving toward phantom [mm]	Moving away from phantom [mm]
700MHz	22	23	8	9	9	10	21	22
800MHz	22	23	8	9	9	10	21	22
1750 MHz	22	23	8	9	9	10	21	22
1900 MHz	22	23	8	9	9	10	21	22
2600 MHz	22	23	8	9	9	10	21	22

Distance Measurement verification for Proximity sensor

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

Distance	Distance to DUT Output power (dBm)									
	27	26	25	24	23	22	21	20	19	18
UMTS Band 5	24.02	24.13	24.09	24.01	24.01	16.46	16.38	16.43	16.43	16.51
UMTS Band 4	23.45	23.39	23.51	23.48	23.56	13.68	13.70	13.80	13.66	13.65
UMTS Band 2	24.07	24.07	24.04	24.07	23.93	13.90	14.01	13.91	13.91	13.86
LTE Band 2	24.39	24.32	24.38	24.39	24.34	12.81	12.87	12.94	12.97	12.88
LTE Band 4	23.76	23.86	23.79	23.77	23.93	12.50	12.47	12.41	12.52	12.37
LTE Band 5	23.86	24.01	23.84	23.94	23.96	15.82	15.77	15.90	15.77	15.87
LTE Band 7	21.94	22.02	22.07	22.06	21.95	10.86	10.71	10.72	10.82	10.90
LTE Band 12	24.78	24.71	24.71	24.82	24.66	14.23	14.33	14.36	14.27	14.24
LTE Band 13	24.42	24.39	24.48	24.38	24.50	13.80	13.72	13.79	13.79	13.76
LTE Band 25	24.60	24.56	24.52	24.57	24.58	13.16	13.25	13.21	13.15	13.24
LTE Band 26	24.09	24.03	24.05	24.08	23.93	13.66	13.71	13.61	13.68	13.70
LTE Band 41	24.26	24.19	24.32	24.31	24.37	13.27	13.19	13.29	13.12	13.27
LTE Band 41(HPUE)	26.39	26.50	26.38	26.45	26.41	13.17	13.04	13.20	13.24	13.23
LTE Band 66	24.24	24.17	24.22	24.07	24.13	12.89	12.78	12.83	12.89	12.95
LTE Band 71	24.55	24.60	24.64	24.65	24.65	13.74	13.71	13.86	13.87	13.80
N2	23.45	23.47	23.40	23.46	23.41	13.36	13.32	13.36	13.39	13.30
N5	24.25	24.14	24.13	24.24	24.22	16.10	16.12	16.10	16.07	16.25
N25	23.53	23.38	23.54	23.41	23.47	14.17	13.98	13.99	14.03	14.09
N41	24.30	24.40	24.32	24.40	24.29	13.86	13.76	13.81	13.82	13.82
N41(HPUE)	26.46	26.53	26.43	26.57	26.59	13.81	13.88	13.88	13.93	13.82
N66	24.52	24.58	24.56	24.49	24.53	13.42	13.59	13.48	13.59	13.51
N71	23.80	23.79	23.81	23.75	23.81	14.27	14.26	14.30	14.13	14.12

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

Distance	Distance to DUT Output power (dBm)									
	19	20	21	22	23	24	25	26	27	28
UMTS Band 5	16.35	16.40	16.38	16.35	16.44	24.12	24.11	23.97	23.95	24.00
UMTS Band 4	13.64	13.83	13.67	13.75	13.76	23.39	23.41	23.47	23.51	23.44
UMTS Band 2	13.94	14.01	13.84	13.83	13.90	23.94	23.93	24.01	24.06	24.04
LTE Band 2	13.00	12.90	12.98	12.84	12.91	24.46	24.50	24.33	24.41	24.38
LTE Band 4	12.44	12.36	12.49	12.39	12.55	23.77	23.88	23.75	23.75	23.94
LTE Band 5	15.80	15.89	15.89	15.85	15.77	23.92	24.04	23.95	23.85	23.98
LTE Band 7	10.74	10.89	10.77	10.75	10.80	21.97	21.97	21.96	22.06	21.99
LTE Band 12	14.40	14.31	14.21	14.27	14.38	24.82	24.84	24.76	24.73	24.74
LTE Band 13	13.72	13.82	13.71	13.82	13.83	24.43	24.42	24.36	24.53	24.45
LTE Band 25	13.22	13.33	13.25	13.25	13.15	24.48	24.47	24.57	24.49	24.50
LTE Band 26	13.75	13.68	13.65	13.70	13.60	23.96	23.91	24.07	24.08	24.05
LTE Band 41	13.26	13.18	13.19	13.09	13.24	24.27	24.38	24.28	24.35	24.28
LTE Band 41(HPUE)	13.22	13.21	13.20	13.16	13.18	26.38	26.35	26.38	26.44	26.38
LTE Band 66	12.78	12.94	12.93	12.94	12.86	24.07	24.20	24.22	24.19	24.20
LTE Band 71	13.87	13.68	13.85	13.84	13.88	24.64	24.51	24.65	24.55	24.63
N2	13.34	13.44	13.45	13.27	13.29	23.43	23.47	23.48	23.44	23.57
N5	16.20	16.26	16.14	16.17	16.24	24.28	24.31	24.26	24.27	24.32
N25	14.10	14.08	14.06	13.97	14.08	23.53	23.54	23.40	23.52	23.49
N41	13.76	13.86	13.83	13.67	13.70	24.37	24.34	24.38	24.27	24.29
N41(HPUE)	13.79	13.93	13.82	13.76	13.80	26.58	26.46	26.52	26.50	26.41
N66	13.49	13.44	13.42	13.54	13.54	24.49	24.62	24.48	24.59	24.62
N71	14.31	14.17	14.27	14.20	14.23	23.81	23.74	23.86	23.73	23.72

Based on the most conservative measured triggering distance of 22mm, additional Body SAR measurements were required at 21mm from rear side for the above modes.

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

Distance	Distance to DUT Output power (dBm)									
	13	12	11	10	9	8	7	6	5	4
UMTS Band 5	23.96	24.10	24.09	24.12	23.94	16.32	16.36	16.35	16.42	16.49
UMTS Band 4	23.37	23.45	23.50	23.48	23.48	13.76	13.84	13.68	13.70	13.82
UMTS Band 2	24.11	24.06	24.00	24.11	23.93	13.98	13.89	13.88	13.83	13.89
LTE Band 2	24.39	24.48	24.33	24.39	24.32	12.87	12.94	12.91	12.98	12.97
LTE Band 4	23.90	23.74	23.90	23.79	23.80	12.50	12.46	12.55	12.50	12.39
LTE Band 5	23.84	24.01	23.87	23.96	23.95	15.84	15.80	15.73	15.89	15.74
LTE Band 7	22.11	21.95	22.02	21.92	22.05	10.78	10.75	10.70	10.88	10.70
LTE Band 12	24.67	24.71	24.80	24.77	24.77	14.26	14.27	14.40	14.28	14.25
LTE Band 13	24.47	24.52	24.48	24.41	24.41	13.74	13.75	13.67	13.64	13.72
LTE Band 25	24.51	24.59	24.55	24.66	24.50	13.31	13.22	13.24	13.22	13.20
LTE Band 26	24.04	24.01	24.02	23.92	24.03	13.70	13.56	13.61	13.68	13.63
LTE Band 41	24.36	24.27	24.22	24.36	24.31	13.29	13.17	13.18	13.15	13.16
LTE Band 41(HPUE)	26.37	26.45	26.43	26.41	26.41	13.06	13.18	13.14	13.21	13.05
LTE Band 66	24.07	24.13	24.07	24.19	24.08	12.78	12.81	12.92	12.82	12.81
LTE Band 71	24.66	24.53	24.67	24.47	24.62	13.68	13.69	13.85	13.72	13.70
N2	23.52	23.56	23.52	23.52	23.39	13.35	13.44	13.37	13.31	13.31
N5	24.15	24.20	24.28	24.25	24.14	16.19	16.12	16.20	16.07	16.26
N25	23.50	23.37	23.44	23.40	23.45	13.99	14.12	14.01	14.17	14.01
N41	24.41	24.34	24.39	24.28	24.37	13.77	13.72	13.74	13.86	13.76
N41(HPUE)	26.50	26.53	26.52	26.41	26.54	13.88	13.85	13.91	13.78	13.87
N66	24.50	24.63	24.50	24.63	24.57	13.55	13.58	13.45	13.52	13.48
N71	23.96	24.10	24.09	24.12	23.94	16.32	16.36	16.35	16.42	16.49

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

Distance	Distance to DUT Output power (dBm)									
	5	6	7	8	9	10	11	12	13	14
UMTS Band 5	16.49	16.47	16.40	16.35	16.52	24.02	24.09	24.09	24.04	23.96
UMTS Band 4	13.70	13.73	13.69	13.67	13.74	23.52	23.56	23.38	23.43	23.48
UMTS Band 2	13.94	13.97	13.99	14.00	13.91	24.04	23.97	23.99	24.05	23.96
LTE Band 2	12.93	12.88	12.85	12.96	12.98	24.48	24.50	24.37	24.35	24.39
LTE Band 4	12.44	12.48	12.53	12.49	12.54	23.83	23.88	23.81	23.86	23.87
LTE Band 5	15.81	15.74	15.89	15.80	15.93	23.88	23.85	23.96	23.99	23.97
LTE Band 7	10.72	10.78	10.78	10.87	10.79	21.99	22.12	21.94	21.99	22.05
LTE Band 12	14.35	14.22	14.32	14.28	14.39	24.68	24.65	24.85	24.75	24.75
LTE Band 13	13.63	13.80	13.64	13.68	13.80	24.36	24.38	24.36	24.46	24.43
LTE Band 25	13.26	13.15	13.30	13.15	13.15	24.48	24.66	24.50	24.62	24.51
LTE Band 26	13.66	13.57	13.75	13.74	13.68	23.94	23.93	24.09	24.03	24.10
LTE Band 41	13.27	13.09	13.09	13.17	13.20	24.36	24.22	24.25	24.36	24.39
LTE Band 41(HPUE)	13.16	13.17	13.11	13.08	13.24	26.43	26.47	26.34	26.38	26.46
LTE Band 66	12.82	12.93	12.94	12.95	12.93	24.20	24.15	24.24	24.25	24.08
LTE Band 71	13.83	13.76	13.80	13.82	13.84	24.56	24.63	24.53	24.62	24.55
N2	13.38	13.26	13.45	13.43	13.45	23.54	23.43	23.50	23.47	23.54
N5	16.22	16.11	16.07	16.14	16.09	24.25	24.29	24.26	24.30	24.25
N25	14.02	13.98	14.05	13.98	14.13	23.37	23.42	23.56	23.56	23.45
N41	13.68	13.69	13.83	13.75	13.69	24.33	24.24	24.23	24.36	24.31
N41(HPUE)	13.94	13.88	13.92	13.81	13.85	26.57	26.41	26.39	26.50	26.50
N66	13.46	13.50	13.58	13.53	13.53	24.48	24.51	24.61	24.63	24.46
N71	14.30	14.15	14.28	14.31	14.13	23.80	23.73	23.88	23.69	23.70

Based on the most conservative measured triggering distance of 8mm, additional Body SAR measurements were required at 7mm from right side for the above modes

Right Corner side – EUT Moving toward (trigger) to the Phantom

Distance	Distance to DUT Output power (dBm)									
	14	13	12	11	10	9	8	7	6	5
UMTS Band 5	24.01	24.02	24.00	24.11	23.99	16.40	16.40	16.39	16.50	16.41
UMTS Band 4	23.50	23.48	23.37	23.49	23.55	13.74	13.81	13.77	13.83	13.75
UMTS Band 2	23.92	24.04	24.00	24.09	24.11	14.02	13.83	13.92	13.87	13.94
LTE Band 2	24.33	24.41	24.41	24.31	24.36	12.82	12.95	12.95	12.83	12.88
LTE Band 4	23.89	23.76	23.86	23.77	23.85	12.44	12.48	12.49	12.48	12.51
LTE Band 5	24.00	23.89	23.88	23.93	23.86	15.89	15.75	15.84	15.82	15.93
LTE Band 7	22.03	22.12	22.04	22.06	22.05	10.90	10.83	10.71	10.86	10.80
LTE Band 12	24.65	24.81	24.84	24.77	24.78	14.30	14.35	14.37	14.35	14.32
LTE Band 13	24.54	24.42	24.46	24.53	24.36	13.63	13.72	13.70	13.78	13.74
LTE Band 25	24.54	24.66	24.63	24.58	24.59	13.25	13.22	13.15	13.23	13.14
LTE Band 26	23.98	24.03	24.05	23.99	24.10	13.60	13.73	13.68	13.61	13.65
LTE Band 41	24.32	24.29	24.36	24.21	24.23	13.19	13.19	13.17	13.28	13.23
LTE Band 41(HPUE)	26.48	26.40	26.34	26.40	26.32	13.04	13.06	13.13	13.12	13.21
LTE Band 66	24.08	24.06	24.07	24.07	24.20	12.97	12.87	12.92	12.97	12.87
LTE Band 71	24.58	24.53	24.66	24.52	24.51	13.83	13.76	13.88	13.73	13.73
N2	23.59	23.47	23.50	23.45	23.43	13.39	13.32	13.45	13.27	13.44
N5	24.15	24.21	24.17	24.32	24.26	16.26	16.07	16.14	16.27	16.09
N25	23.42	23.46	23.55	23.55	23.47	14.06	14.08	13.97	14.16	14.00
N41	24.38	24.34	24.36	24.25	24.33	13.81	13.84	13.72	13.66	13.71
N41(HPUE)	26.54	26.52	26.57	26.44	26.48	13.93	13.81	13.78	13.84	13.84
N66	24.49	24.52	24.54	24.61	24.63	13.43	13.49	13.51	13.56	13.51
N71	23.80	23.86	23.76	23.81	23.86	14.29	14.21	14.27	14.23	14.18

Right Corner side – EUT Moving away (Release) from the Phantom

Distance	Distance to DUT Output power (dBm)									
	6	7	8	9	10	11	12	13	14	15
UMTS Band 5	16.36	16.50	16.36	16.42	16.52	24.10	23.96	23.93	23.96	24.06
UMTS Band 4	13.73	13.84	13.80	13.68	13.71	23.38	23.44	23.51	23.44	23.50
UMTS Band 2	13.93	13.92	13.83	13.86	14.02	24.01	23.94	24.02	24.05	23.96
LTE Band 2	12.87	12.85	12.93	12.89	12.97	24.42	24.47	24.38	24.34	24.44
LTE Band 4	12.36	12.43	12.54	12.51	12.43	23.77	23.92	23.78	23.93	23.77
LTE Band 5	15.76	15.78	15.89	15.80	15.93	23.96	24.02	24.02	23.97	24.03
LTE Band 7	10.83	10.89	10.84	10.75	10.88	22.08	22.12	22.12	22.09	21.96
LTE Band 12	14.29	14.31	14.35	14.25	14.40	24.83	24.85	24.82	24.72	24.78
LTE Band 13	13.75	13.74	13.72	13.67	13.77	24.42	24.37	24.43	24.52	24.42
LTE Band 25	13.14	13.14	13.28	13.15	13.33	24.60	24.54	24.51	24.51	24.62
LTE Band 26	13.71	13.66	13.68	13.58	13.70	23.92	23.95	23.96	24.08	23.93
LTE Band 41	13.28	13.13	13.22	13.09	13.21	24.20	24.38	24.25	24.30	24.35
LTE Band 41(HPUE)	13.14	13.16	13.11	13.04	13.19	26.49	26.52	26.48	26.37	26.41
LTE Band 66	12.87	12.80	12.84	12.93	12.89	24.25	24.13	24.16	24.06	24.06
LTE Band 71	13.70	13.71	13.77	13.71	13.83	24.60	24.55	24.50	24.53	24.52
N2	13.31	13.45	13.39	13.44	13.31	23.42	23.53	23.52	23.41	23.42
N5	16.12	16.23	16.24	16.16	16.15	24.29	24.28	24.15	24.30	24.22
N25	14.17	14.09	14.10	14.01	13.97	23.46	23.42	23.48	23.46	23.40
N41	13.69	13.83	13.84	13.78	13.80	24.31	24.37	24.34	24.41	24.26
N41(HPUE)	13.86	13.76	13.76	13.85	13.90	26.55	26.39	26.52	26.43	26.54
N66	13.43	13.51	13.45	13.51	13.48	24.60	24.53	24.57	24.63	24.60
N71	14.22	14.24	14.25	14.22	14.16	23.88	23.84	23.74	23.75	23.85

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

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

Distance	Distance to DUT Output power (dBm)									
	26	25	24	23	22	21	20	19	18	17
UMTS Band 5	24.14	23.98	24.08	23.96	23.98	16.44	16.43	16.48	16.45	16.43
UMTS Band 4	23.37	23.39	23.46	23.47	23.51	13.82	13.67	13.71	13.76	13.66
UMTS Band 2	23.93	23.95	23.96	23.98	24.07	14.03	13.86	13.95	13.85	13.85
LTE Band 2	24.36	24.31	24.33	24.48	24.33	12.91	12.86	12.87	12.86	12.89
LTE Band 4	23.92	23.90	23.85	23.85	23.74	12.41	12.36	12.53	12.37	12.40
LTE Band 5	23.96	23.86	23.84	23.94	24.03	15.88	15.78	15.75	15.88	15.91
LTE Band 7	21.96	22.04	22.10	22.04	22.12	10.85	10.85	10.89	10.72	10.90
LTE Band 12	24.72	24.74	24.77	24.85	24.74	14.20	14.23	14.23	14.35	14.33
LTE Band 13	24.44	24.40	24.35	24.41	24.39	13.75	13.79	13.77	13.65	13.75
LTE Band 25	24.62	24.66	24.60	24.67	24.56	13.18	13.24	13.18	13.30	13.29
LTE Band 26	23.91	24.03	24.05	24.00	24.07	13.60	13.70	13.63	13.59	13.70
LTE Band 41	24.32	24.20	24.38	24.25	24.24	13.26	13.21	13.27	13.29	13.23
LTE Band 41(HPUE)	26.39	26.51	26.38	26.38	26.49	13.19	13.10	13.06	13.16	13.10
LTE Band 66	24.11	24.14	24.21	24.08	24.08	12.94	12.79	12.93	12.98	12.96
LTE Band 71	24.51	24.57	24.47	24.56	24.67	13.79	13.76	13.82	13.72	13.77
N2	23.40	23.45	23.41	23.45	23.50	13.36	13.38	13.26	13.31	13.29
N5	24.26	24.16	24.21	24.28	24.28	16.17	16.12	16.19	16.23	16.18
N25	23.44	23.43	23.50	23.47	23.49	13.97	14.16	14.11	14.17	13.99
N41	24.37	24.33	24.38	24.21	24.23	13.82	13.73	13.72	13.81	13.69
N41(HPUE)	26.56	26.59	26.46	26.53	26.57	13.89	13.84	13.74	13.84	13.92
N66	24.47	24.62	24.56	24.45	24.50	13.46	13.53	13.41	13.48	13.46
N71	23.86	23.81	23.77	23.71	23.73	14.17	14.22	14.15	14.21	14.29

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

Distance	Distance to DUT Output power (dBm)									
	18	19	20	21	22	23	24	25	26	27
UMTS Band 5	16.33	16.45	16.38	16.46	16.34	24.03	23.99	24.10	24.05	24.11
UMTS Band 4	13.81	13.77	13.81	13.74	13.74	23.42	23.38	23.35	23.43	23.37
UMTS Band 2	13.97	13.99	13.97	14.02	14.02	24.06	24.07	24.05	23.92	24.00
LTE Band 2	12.89	12.93	12.96	12.90	12.91	24.37	24.40	24.33	24.37	24.38
LTE Band 4	12.54	12.42	12.39	12.50	12.53	23.90	23.86	23.76	23.75	23.79
LTE Band 5	15.78	15.88	15.81	15.87	15.86	23.85	24.02	23.85	23.88	23.87
LTE Band 7	10.83	10.77	10.71	10.83	10.90	22.07	21.94	22.08	22.01	21.92
LTE Band 12	14.20	14.32	14.34	14.40	14.29	24.79	24.70	24.67	24.85	24.66
LTE Band 13	13.78	13.68	13.75	13.72	13.77	24.41	24.35	24.53	24.51	24.39
LTE Band 25	13.30	13.32	13.27	13.28	13.26	24.51	24.59	24.50	24.62	24.50
LTE Band 26	13.72	13.62	13.72	13.57	13.63	23.98	24.02	24.02	23.94	24.00
LTE Band 41	13.24	13.12	13.25	13.21	13.24	24.24	24.22	24.37	24.37	24.19
LTE Band 41(HPUE)	13.10	13.07	13.13	13.06	13.21	26.46	26.49	26.32	26.51	26.35
LTE Band 66	12.95	12.80	12.78	12.93	12.89	24.13	24.21	24.07	24.26	24.06
LTE Band 71	13.71	13.68	13.88	13.83	13.68	24.55	24.66	24.58	24.66	24.58
N2	13.44	13.26	13.28	13.30	13.29	23.43	23.42	23.57	23.44	23.50
N5	16.07	16.12	16.09	16.10	16.15	24.14	24.12	24.30	24.31	24.31
N25	14.09	14.12	14.10	13.97	14.17	23.52	23.36	23.37	23.37	23.47
N41	13.82	13.67	13.74	13.82	13.82	24.23	24.34	24.31	24.31	24.23
N41(HPUE)	13.77	13.85	13.94	13.80	13.83	26.43	26.53	26.42	26.50	26.41
N66	13.59	13.50	13.52	13.41	13.55	24.48	24.54	24.54	24.54	24.43
N71	14.23	14.24	14.27	14.31	14.30	23.86	23.83	23.88	23.81	23.83

Based on the most conservative measured triggering distance of 21mm, additional Body SAR measurements were required at 20mm from top side for the above modes.

1.3 Proximity Sensor Coverage for SAR measurements

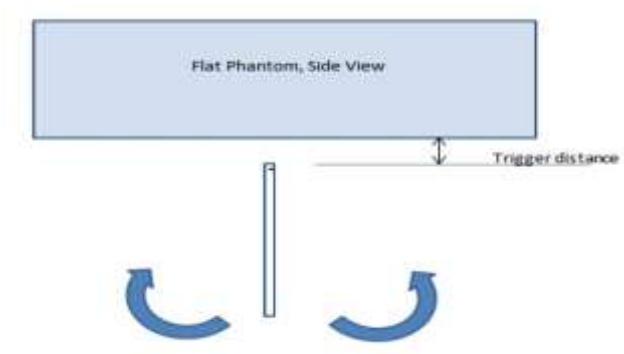
(KDB 616217 D04v01r02 §6.3)

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 ±45°. 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 ±45°.



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

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

Band (MHz)	Minimum distance at which power reduction was maintained over-45°	Power reduction status										
		-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
700MHz	21 mm	On	On	On	On	On	On	On	On	On	On	On
800MHz	21 mm	On	On	On	On	On	On	On	On	On	On	On
1750 MHz	21 mm	On	On	On	On	On	On	On	On	On	On	On
1900 MHz	21 mm	On	On	On	On	On	On	On	On	On	On	On
2600 MHz	21 mm	On	On	On	On	On	On	On	On	On	On	On

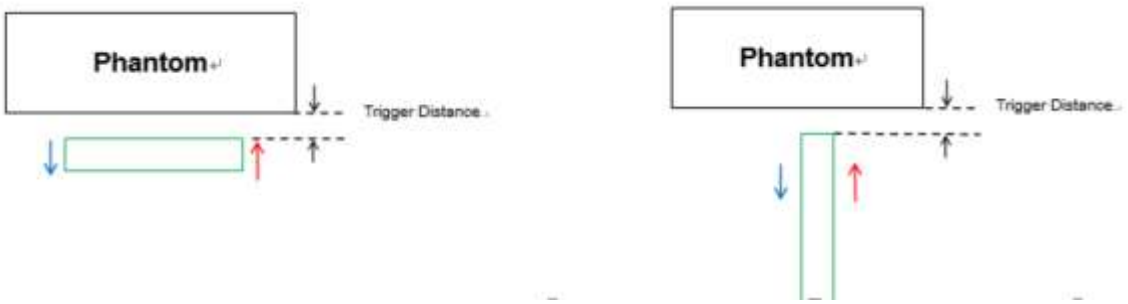
1.5 Resulting test positions for Body SAR measurements

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR [mm]
Main 1 Ant	Rear	22	N/A	N/A	21
	Right Side	8	N/A	N/A	7
	Right Corner	9	N/A	N/A	8
	Top	21	N/A	N/A	20

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 use conditions.

2. Power Reduction Verification for Main 3 Ant

Mechanism(s)	Mode/Band	Device State Index	
		Un-triggered (Max Power)	Triggered (Reduced Power)
Grip	N 77	DSI 0	DSI 1



Proximity Sensor Trigger Distance Assessment KDB 616217 D04 §6.2 (Rear / Top/ Right/ Right corner 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 Right Side		Trigger distance Right Corner Side		Trigger distance Top	
	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]	Moving toward phantom [mm]	Moving away from phantom [mm]
3500 MHz	10.5	11.5	8	9	9	10	13	14

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

Distance	Distance to DUT Output power (dBm)									
	15.5	14.5	13.5	12.5	11.5	10.5	9.5	8.5	7.5	6.5
N77 PC2	26.68	26.65	26.79	26.76	26.62	14.24	14.24	14.10	14.20	14.10
N77 PC3	24.71	24.63	24.64	24.63	24.76	13.99	14.00	14.10	14.13	13.98

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

Distance	Distance to DUT Output power (dBm)									
	7.5	8.5	9.5	10.5	11.5	12.5	13.5	14.5	15.5	16.5
N77 PC2	14.21	14.13	14.18	14.04	14.21	26.69	26.78	26.74	26.79	26.66
N77 PC3	14.11	14.00	14.05	14.05	14.05	24.79	24.70	24.70	24.78	24.70

Based on the most conservative measured triggering distance of 10.5mm, additional Body SAR measurements were required at 9.5mm from rear side for the above modes.

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

Distance	Distance to DUT Output power (dBm)									
	3	4	5	6	7	8	7	6	5	4
N77 PC2	26.67	26.65	26.73	26.70	26.63	14.14	14.18	14.19	14.15	14.17
N77 PC3	24.65	24.72	24.68	24.72	24.75	14.11	14.06	14.17	14.09	14.10

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

Distance	Distance to DUT Output power (dBm)									
	5	6	7	8	9	10	11	12	13	14
N77 PC2	14.15	14.17	14.15	14.19	14.10	26.75	26.70	26.71	26.79	26.69
N77 PC3	14.08	13.97	13.99	14.16	14.05	24.74	24.63	24.80	24.77	24.60

Based on the most conservative measured triggering distance of 8mm, additional Body SAR measurements were required at 7mm from right side for the above modes.

Right Corner side – EUT Moving toward (trigger) to the Phantom

Distance	Distance to DUT Output power (dBm)									
	4	5	6	7	8	9	10	11	12	13
N77 PC2	26.75	26.79	26.74	26.73	26.74	14.21	14.08	14.10	14.20	14.08
N77 PC3	24.68	24.76	24.71	24.68	24.70	13.97	14.03	14.06	14.07	14.07

Right Corner side – EUT Moving away (Release) from the Phantom

Distance	Distance to DUT Output power (dBm)									
	6	7	8	9	10	11	12	13	14	15
N77 PC2	14.07	14.04	14.15	14.08	14.07	26.80	26.62	26.60	26.63	26.72
N77 PC3	14.00	14.06	14.01	14.03	14.10	24.62	24.62	24.67	24.62	24.68

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

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

Distance	Distance to DUT Output power (dBm)									
	18	17	16	15	14	13	12	11	10	9
N77 PC2	26.65	26.73	26.75	26.69	26.73	14.14	14.15	14.14	14.20	14.14
N77 PC3	24.60	24.64	24.65	24.65	24.65	14.02	13.98	14.08	14.17	14.09

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

Distance	Distance to DUT Output power (dBm)									
	10	11	12	13	14	15	16	17	18	19
N77 PC2	14.07	14.24	14.17	14.16	14.21	26.78	26.67	26.69	26.63	26.76
N77 PC3	14.13	14.05	14.04	14.13	14.01	24.77	24.80	24.70	24.65	24.76

Based on the most conservative measured triggering distance of 13mm, additional Body SAR measurements were required at 12mm from top side for the above modes.

2.1 Proximity Sensor Coverage for SAR measurements

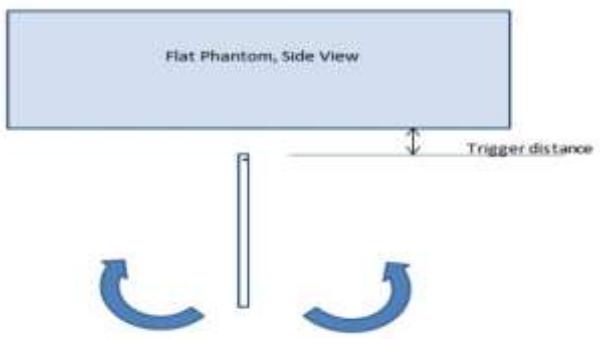
(KDB 616217 D04v01r02 §6.3)

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

2.2 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 ±45°. 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 ±45°.



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

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

Band (MHz)	Minimum distance at which power reduction was maintained over-45°	Power reduction status										
		-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
3500 MHz	13 mm	On	On	On	On	On	On	On	On	On	On	On

2.3 Resulting test positions for Body SAR measurements

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR [mm]
Main 3 Ant	Rear	10.5	N/A	N/A	9.5
	Right	8	N/A	N/A	7
	Right Corner	9	N/A	N/A	8
	Top	13	N/A	N/A	12

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 proximity use conditions.

3. Power reduction Verification for WLAN 1 Ant

This device uses a power reduction mechanism for SAR compliance for WLAN operations during Grip sensor is activated.

Mechanism(s)	Mode/Band	Un-triggered (Max Power) Except 38ch, 42ch, 50ch, 58ch, 62ch, 102ch, 106ch, 114ch	Mechanism 1: (Reduced Power)
Grip	2.4GHz 802.11g	18.00	12.86
Grip	2.4GHz 802.11b	17.86	12.69
Grip	2.4GHz 802.11n	17.74	12.54
Grip	2.4GHz 802.11ax SU	17.13	12.46
Grip	2.4GHz Bluetooth	16.49	9.88
Grip	5GHz 802.11a	17.16	8.27
Grip	5GHz 802.11n 20MHz	17.03	7.90
Grip	5GHz 802.11ac 20MHz	16.88	8.04
Grip	5GHz 802.11ax 20MHz SU	17.71	8.01
Grip	5GHz 802.11n 40MHz	16.18	8.05
Grip	5GHz 802.11ac 40MHz	16.16	7.51
Grip	5GHz 802.11ax 40MHz SU	16.13	8.03
Grip	5GHz 802.11ac 80MHz	14.93	8.82
Grip	5GH 802.11ax 80MHz SU	15.21	8.12
Grip	5GHz 802.11ac 160MHz	11.51	8.02
Grip	5GHz 802.11ax 160MHz SU	11.63	8.11
Grip	6GHz 802.11a	9.86	8.81
Grip	6GHz 802.11ax 20MHz	9.63	8.63
Grip	6GHZ 802.11ax 40MHz	9.04	7.81
Grip	6GHz 802.11ax 80MHz	9.05	7.83
Grip	6GHz 802.11ax 160MHz	9.02	7.91

Mechanism(s)	Mode/Band	Un-triggered (Max Power) Except 38ch, 42ch, 50ch, 58ch, 62ch, 102ch, 106ch, 114ch	Mechanism 1: (Reduced Power)
mmWave,Sub6,RSDB active	2.4GHz 802.11g	18.00	10.92
mmWave,Sub6,RSDB active	2.4GHz 802.11b	17.86	10.78
mmWave,Sub6,RSDB active	2.4GHz 802.11n	17.74	10.69
mmWave,Sub6,RSDB active	2.4GHz 802.11ax SU	17.13	10.53
mmWave,Sub6,RSDB active	2.4GHz Bluetooth	16.49	8.44
mmWave,Sub6,RSDB active	5GHz 802.11a	17.16	6.03
mmWave,Sub6,RSDB active	5GHz 802.11n 20MHz	17.03	5.67
mmWave,Sub6,RSDB active	5GHz 802.11ac 20MHz	16.88	5.58
mmWave,Sub6,RSDB active	5GHz 802.11ax 20MHz SU	17.71	6.71
mmWave,Sub6,RSDB active	5GHz 802.11n 40MHz	16.18	6.64
mmWave,Sub6,RSDB active	5GHz 802.11ac 40MHz	16.16	6.75
mmWave,Sub6,RSDB active	5GHz 802.11ax 40MHz SU	16.13	6.51
mmWave,Sub6,RSDB active	5GHz 802.11ac 80MHz	14.93	6.37
mmWave,Sub6,RSDB active	5GH 802.11ax 80MHz SU	15.21	6.21
mmWave,Sub6,RSDB active	5GHz 802.11ac 160MHz	11.51	6.34
mmWave,Sub6,RSDB active	5GHz 802.11ax 160MHz SU	11.63	6.41
mmWave,Sub6,RSDB active	6GHz 802.11a	9.86	6.31
mmWave,Sub6,RSDB active	6GHz 802.11ax 20MHz	9.63	6.43
mmWave,Sub6,RSDB active	6GHZ 802.11ax 40MHz	9.04	5.81
mmWave,Sub6,RSDB active	6GHz 802.11ax 80MHz	9.05	5.86
mmWave,Sub6,RSDB active	6GHz 802.11ax 160MHz	9.02	5.79

Tissue simulating liquid	Trigger distance Rear		Trigger distance Right Side		Trigger distance Right Corner Side		Trigger distance Top	
	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]	Moving toward phantom [mm]	Moving away from phantom [mm]
2450MHz	20	21	8	9	9	10	24	25
5000MHz	20	21	8	9	9	10	24	25
6500MHz	20	21	8	9	9	10	24	25

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

Mode	Distance to DUT Output power (dBm)									
	25	24	23	22	21	20	19	18	17	16
2.4GHz 802.11g	18.09	17.97	17.95	18.00	18.10	12.89	12.79	12.90	12.92	12.91
2.4GHz 802.11b	17.77	17.96	17.94	17.88	17.85	12.63	12.61	12.69	12.74	12.78
2.4GHz 802.11n	17.75	17.76	17.76	17.64	17.71	12.62	12.64	12.58	12.52	12.50
2.4GHz 802.11ax SU	17.22	17.18	17.21	17.14	17.21	12.53	12.51	12.42	12.37	12.46
2.4GHz Bluetooth	16.56	16.42	16.51	16.49	16.59	9.88	9.97	9.90	9.85	9.90
5GHz 802.11a	17.17	17.19	17.12	17.13	17.25	8.29	8.18	8.21	8.33	8.24
5GHz 802.11n 20MHz	17.07	16.95	17.04	17.00	17.10	7.90	7.87	7.87	7.86	7.93
5GHz 802.11ac 20MHz	16.79	16.87	16.83	16.82	16.90	8.06	8.11	8.11	8.14	8.03
5GHz 802.11ax 20MHz SU	17.72	17.76	17.70	17.70	17.71	7.93	7.97	7.94	7.96	7.98
5GHz 802.11n 40MHz	16.28	16.13	16.27	16.09	16.20	8.14	7.96	8.10	8.08	7.95
5GHz 802.11ac 40MHz	16.12	16.16	16.13	16.10	16.23	7.47	7.56	7.54	7.55	7.41
5GHz 802.11ax 40MHz SU	16.05	16.14	16.23	16.16	16.10	8.02	7.98	8.13	8.02	7.95
5GHz 802.11ac 80MHz	14.98	14.84	14.97	14.97	14.97	8.86	8.83	8.78	8.78	8.92
5GH 802.11ax 80MHz SU	15.16	15.26	15.24	15.20	15.29	8.02	8.14	8.17	8.20	8.14
5GHz 802.11ac 160MHz	11.56	11.60	11.58	11.46	11.48	8.07	8.06	7.99	8.00	8.09
5GHz 802.11ax 160MHz SU	11.64	11.63	11.64	11.56	11.55	8.09	8.16	8.05	8.01	8.01
6GHz 802.11a	9.81	9.79	9.82	9.93	9.77	8.87	8.79	8.71	8.71	8.72
6GHz 802.11ax 20MHz	9.70	9.54	9.58	9.57	9.58	8.55	8.55	8.66	8.73	8.60
6GHZ 802.11ax 40MHz	9.12	9.01	9.14	8.99	9.04	7.03	7.09	7.12	7.07	7.08
6GHz 802.11ax 80MHz	8.97	9.14	8.98	9.13	9.13	7.74	7.90	7.91	7.79	7.84
6GHz 802.11ax 160MHz	9.06	8.97	8.94	9.01	9.06	7.85	7.96	7.95	7.95	7.84

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

Mode	Distance to DUT Output power (dBm)									
	25	24	23	22	21	20	19	18	17	16
2.4GHz 802.11g	12.87	12.88	12.76	12.86	12.95	17.97	17.95	18.10	18.07	18.09
2.4GHz 802.11b	12.63	12.64	12.72	12.63	12.69	17.88	17.87	17.87	17.95	17.96
2.4GHz 802.11n	12.59	12.55	12.62	12.48	12.45	17.81	17.69	17.81	17.70	17.68
2.4GHz 802.11ax SU	12.51	12.54	12.41	12.54	12.50	17.16	17.10	17.20	17.16	17.10
2.4GHz Bluetooth	9.91	9.93	9.97	9.88	9.91	16.56	16.57	16.44	16.56	16.56
5GHz 802.11a	8.23	8.27	8.20	8.31	8.28	17.26	17.06	17.11	17.14	17.15
5GHz 802.11n 20MHz	7.87	7.93	7.92	7.99	7.93	17.04	17.11	17.04	17.08	17.05
5GHz 802.11ac 20MHz	8.07	8.05	8.01	8.13	7.97	16.89	16.98	16.90	16.82	16.84
5GHz 802.11ax 20MHz SU	8.08	7.98	7.99	8.01	8.05	17.66	17.74	17.79	17.80	17.79
5GHz 802.11n 40MHz	8.05	8.10	8.07	7.97	8.08	16.26	16.27	16.25	16.22	16.16
5GHz 802.11ac 40MHz	7.51	7.56	7.56	7.54	7.54	16.14	16.10	16.17	16.24	16.16
5GHz 802.11ax 40MHz SU	8.11	7.94	7.99	8.12	8.12	16.10	16.12	16.11	16.14	16.05
5GHz 802.11ac 80MHz	8.74	8.73	8.88	8.80	8.82	14.86	14.97	14.94	14.89	15.02
5GH 802.11ax 80MHz SU	8.06	8.10	8.07	8.11	8.07	15.28	15.15	15.19	15.17	15.20
5GHz 802.11ac 160MHz	8.09	8.03	8.04	8.06	7.93	11.51	11.46	11.59	11.52	11.54
5GHz 802.11ax 160MHz SU	8.05	8.03	8.21	8.05	8.03	11.64	11.71	11.65	11.65	11.69
6GHz 802.11a	8.71	8.86	8.89	8.74	8.80	9.91	9.96	9.93	9.94	9.78
6GHz 802.11ax 20MHz	8.60	8.57	8.66	8.66	8.55	9.53	9.55	9.67	9.62	9.70
6GHZ 802.11ax 40MHz	7.17	7.19	7.10	7.20	7.11	9.09	9.09	9.08	9.09	9.05
6GHz 802.11ax 80MHz	7.90	7.74	7.89	7.80	7.79	9.05	8.97	8.99	9.15	8.95
6GHz 802.11ax 160MHz	8.01	7.90	7.97	7.95	7.85	8.92	8.99	9.05	8.99	9.11

Based on the most conservative measured triggering distance of 20mm, additional Body SAR measurements were required at 19mm from rear side for the above modes.

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

Mode	Distance to DUT Output power (dBm)									
	13	12	11	10	9	8	7	6	5	4
2.4GHz 802.11g	17.99	17.93	18.07	18.04	18.04	12.88	12.81	12.84	12.86	12.85
2.4GHz 802.11b	17.88	17.92	17.95	17.85	17.84	12.79	12.79	12.66	12.77	12.70
2.4GHz 802.11n	17.67	17.65	17.73	17.64	17.81	12.57	12.49	12.44	12.57	12.50
2.4GHz 802.11ax SU	17.10	17.21	17.19	17.05	17.23	12.56	12.54	12.53	12.36	12.40
2.4GHz Bluetooth	16.58	16.46	16.45	16.51	16.49	9.94	9.83	9.79	9.90	9.83
5GHz 802.11a	17.25	17.26	17.24	17.21	17.26	8.37	8.31	8.25	8.24	8.22
5GHz 802.11n 20MHz	17.03	16.93	16.93	16.93	16.96	7.90	7.89	7.87	7.86	7.83
5GHz 802.11ac 20MHz	16.84	16.88	16.88	16.88	16.90	8.14	8.12	8.03	8.14	7.98
5GHz 802.11ax 20MHz SU	17.74	17.72	17.76	17.65	17.81	7.91	7.99	8.09	8.07	7.99
5GHz 802.11n 40MHz	16.16	16.09	16.21	16.11	16.16	8.15	8.08	7.96	8.04	7.97
5GHz 802.11ac 40MHz	16.20	16.21	16.14	16.12	16.21	7.41	7.46	7.50	7.59	7.60
5GHz 802.11ax 40MHz SU	16.17	16.22	16.04	16.09	16.09	7.97	7.96	7.98	8.05	8.13
5GHz 802.11ac 80MHz	14.93	15.02	14.93	14.91	14.97	8.73	8.87	8.88	8.78	8.87
5GH 802.11ax 80MHz SU	15.30	15.28	15.21	15.11	15.15	8.07	8.13	8.13	8.10	8.11
5GHz 802.11ac 160MHz	11.46	11.55	11.53	11.54	11.59	8.04	7.97	8.11	8.09	7.99
5GHz 802.11ax 160MHz SU	11.65	11.62	11.65	11.54	11.64	8.08	8.05	8.16	8.16	8.20
6GHz 802.11a	9.93	9.80	9.77	9.89	9.77	8.87	8.86	8.81	8.88	8.78
6GHz 802.11ax 20MHz	9.62	9.69	9.73	9.60	9.54	8.62	8.68	8.61	8.57	8.58
6GHZ 802.11ax 40MHz	9.04	9.01	8.98	9.06	9.06	7.16	7.05	7.07	7.02	7.03
6GHz 802.11ax 80MHz	9.00	9.04	8.95	9.13	9.15	7.86	7.84	7.92	7.83	7.89
6GHz 802.11ax 160MHz	8.95	8.96	9.07	9.07	8.92	8.01	8.01	7.93	7.98	7.88

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

Mode	Distance to DUT Output power (dBm)									
	5	6	7	8	9	10	11	12	13	14
2.4GHz 802.11g	12.90	12.84	12.80	12.95	12.89	17.99	18.00	18.04	18.00	18.10
2.4GHz 802.11b	12.67	12.78	12.76	12.68	12.68	17.89	17.85	17.90	17.91	17.78
2.4GHz 802.11n	12.62	12.61	12.46	12.64	12.49	17.76	17.65	17.68	17.74	17.79
2.4GHz 802.11ax SU	12.52	12.56	12.52	12.39	12.52	17.18	17.19	17.11	17.16	17.03
2.4GHz Bluetooth	9.83	9.80	9.86	9.98	9.94	16.46	16.51	16.57	16.44	16.41
5GHz 802.11a	8.26	8.23	8.25	8.34	8.29	17.13	17.11	17.12	17.16	17.17
5GHz 802.11n 20MHz	7.82	7.82	7.85	7.86	7.98	16.97	17.07	17.07	17.09	17.09
5GHz 802.11ac 20MHz	7.97	8.09	7.94	7.97	8.13	16.84	16.92	16.88	16.78	16.83
5GHz 802.11ax 20MHz SU	7.97	8.07	7.93	8.10	8.05	17.62	17.67	17.75	17.74	17.75
5GHz 802.11n 40MHz	8.01	8.14	8.13	8.10	7.95	16.11	16.18	16.24	16.23	16.10
5GHz 802.11ac 40MHz	7.58	7.51	7.46	7.58	7.61	16.24	16.17	16.25	16.24	16.26
5GHz 802.11ax 40MHz SU	8.07	7.99	8.02	8.13	8.02	16.03	16.14	16.18	16.05	16.23
5GHz 802.11ac 80MHz	8.74	8.75	8.81	8.92	8.89	14.89	14.86	14.98	14.85	14.99
5GH 802.11ax 80MHz SU	8.02	8.13	8.21	8.09	8.19	15.23	15.26	15.21	15.28	15.17
5GHz 802.11ac 160MHz	7.95	8.03	8.01	8.02	7.98	11.56	11.42	11.60	11.45	11.52
5GHz 802.11ax 160MHz SU	8.17	8.11	8.20	8.02	8.07	11.61	11.54	11.68	11.71	11.71
6GHz 802.11a	8.90	8.89	8.82	8.75	8.85	9.85	9.87	9.90	9.76	9.82
6GHz 802.11ax 20MHz	8.71	8.62	8.55	8.61	8.58	9.73	9.71	9.72	9.73	9.68
6GHZ 802.11ax 40MHz	7.03	7.01	7.11	7.09	7.20	9.11	9.04	8.99	9.13	8.97
6GHz 802.11ax 80MHz	7.83	7.80	7.86	7.93	7.82	9.11	9.12	9.11	9.00	9.02
6GHz 802.11ax 160MHz	7.84	8.00	7.85	7.93	7.98	8.98	9.00	9.08	9.03	9.02

Based on the most conservative measured triggering distance of 8mm, additional Body SAR measurements were required at 7mm from right side for the above modes.

Right Corner side – EUT Moving toward (trigger) to the Phantom

Mode	Distance to DUT Output power (dBm)									
	14	13	12	11	10	9	8	7	6	5
2.4GHz 802.11g	18.04	17.91	18.03	18.09	18.10	12.83	12.95	12.94	12.83	12.78
2.4GHz 802.11b	17.88	17.78	17.95	17.78	17.77	12.61	12.75	12.76	12.76	12.70
2.4GHz 802.11n	17.80	17.76	17.84	17.79	17.70	12.48	12.47	12.54	12.44	12.62
2.4GHz 802.11ax SU	17.17	17.18	17.14	17.09	17.12	12.42	12.46	12.53	12.39	12.54
2.4GHz Bluetooth	16.52	16.57	16.44	16.39	16.43	9.85	9.78	9.78	9.81	9.83
5GHz 802.11a	17.16	17.10	17.12	17.25	17.06	8.23	8.24	8.24	8.28	8.20
5GHz 802.11n 20MHz	16.95	17.09	17.03	16.98	17.02	7.93	7.86	7.84	8.00	7.98
5GHz 802.11ac 20MHz	16.91	16.81	16.87	16.79	16.80	8.03	8.04	7.95	7.94	8.04
5GHz 802.11ax 20MHz SU	17.67	17.78	17.81	17.81	17.78	7.91	7.93	8.03	8.00	7.98
5GHz 802.11n 40MHz	16.22	16.11	16.21	16.24	16.12	8.03	8.05	8.11	8.00	8.12
5GHz 802.11ac 40MHz	16.12	16.06	16.23	16.13	16.09	7.50	7.47	7.48	7.45	7.53
5GHz 802.11ax 40MHz SU	16.04	16.16	16.14	16.15	16.17	8.09	7.95	7.99	8.00	8.13
5GHz 802.11ac 80MHz	14.98	14.89	14.87	15.02	14.94	8.82	8.72	8.74	8.79	8.89
5GH 802.11ax 80MHz SU	15.17	15.30	15.22	15.18	15.31	8.02	8.09	8.19	8.16	8.10
5GHz 802.11ac 160MHz	11.60	11.43	11.46	11.55	11.59	8.02	8.01	7.97	7.97	8.09
5GHz 802.11ax 160MHz SU	11.62	11.65	11.70	11.56	11.68	8.14	8.02	8.12	8.06	8.03
6GHz 802.11a	9.89	9.90	9.79	9.76	9.95	8.78	8.86	8.74	8.87	8.79
6GHz 802.11ax 20MHz	9.60	9.56	9.67	9.71	9.54	8.56	8.69	8.54	8.68	8.57
6GHZ 802.11ax 40MHz	8.94	9.07	9.12	8.98	8.95	7.02	7.06	7.03	7.13	7.07
6GHz 802.11ax 80MHz	9.10	8.99	8.96	9.11	8.95	7.77	7.85	7.93	7.77	7.76
6GHz 802.11ax 160MHz	9.00	9.06	8.96	8.95	9.00	7.88	7.86	7.97	7.96	7.96

Right Corner side – EUT Moving away (Release) from the Phantom

Mode	Distance to DUT Output power (dBm)									
	6	7	8	9	10	11	12	13	14	15
2.4GHz 802.11g	12.87	12.91	12.92	12.83	12.82	18.06	17.94	17.91	18.04	17.98
2.4GHz 802.11b	12.64	12.62	12.66	12.60	12.74	17.96	17.96	17.87	17.80	17.89
2.4GHz 802.11n	12.50	12.48	12.60	12.53	12.55	17.74	17.67	17.72	17.66	17.70
2.4GHz 802.11ax SU	12.47	12.52	12.46	12.39	12.49	17.05	17.06	17.23	17.19	17.12
2.4GHz Bluetooth	9.81	9.96	9.98	9.96	9.86	16.51	16.56	16.56	16.46	16.59
5GHz 802.11a	8.29	8.17	8.26	8.29	8.17	17.10	17.21	17.17	17.13	17.06
5GHz 802.11n 20MHz	7.86	7.80	7.81	7.94	7.92	17.10	17.01	17.02	17.08	17.03
5GHz 802.11ac 20MHz	8.03	7.96	8.13	8.08	7.95	16.80	16.92	16.84	16.88	16.90
5GHz 802.11ax 20MHz SU	8.10	7.98	8.07	8.00	8.08	17.65	17.79	17.77	17.70	17.80
5GHz 802.11n 40MHz	8.02	8.07	8.06	8.06	8.10	16.22	16.23	16.20	16.12	16.28
5GHz 802.11ac 40MHz	7.55	7.48	7.56	7.46	7.61	16.07	16.17	16.13	16.21	16.09
5GHz 802.11ax 40MHz SU	8.03	7.95	8.02	7.95	8.07	16.10	16.03	16.11	16.18	16.14
5GHz 802.11ac 80MHz	8.72	8.92	8.86	8.83	8.82	15.00	14.96	15.00	14.95	14.97
5GH 802.11ax 80MHz SU	8.20	8.03	8.06	8.04	8.03	15.16	15.28	15.20	15.28	15.28
5GHz 802.11ac 160MHz	7.96	8.02	7.97	8.09	8.05	11.56	11.58	11.56	11.49	11.44
5GHz 802.11ax 160MHz SU	8.08	8.09	8.14	8.18	8.14	11.67	11.53	11.70	11.56	11.70
6GHz 802.11a	8.79	8.83	8.75	8.90	8.83	9.77	9.89	9.87	9.89	9.94
6GHz 802.11ax 20MHz	8.71	8.66	8.67	8.55	8.70	9.70	9.60	9.62	9.57	9.67
6GHZ 802.11ax 40MHz	7.06	7.00	7.03	7.19	7.19	9.11	9.13	9.00	8.97	8.99
6GHz 802.11ax 80MHz	7.83	7.78	7.82	7.85	7.90	9.04	9.06	8.98	9.08	9.15
6GHz 802.11ax 160MHz	7.85	7.82	7.92	7.95	7.95	8.98	9.03	9.09	9.09	9.08

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

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

Mode	Distance to DUT Output power (dBm)									
	28	27	26	25	24	23	22	21	20	19
2.4GHz 802.11g	17.92	17.92	17.99	18.09	18.05	12.77	12.94	12.77	12.88	12.92
2.4GHz 802.11b	17.84	17.82	17.85	17.91	17.84	12.61	12.72	12.62	12.69	12.78
2.4GHz 802.11n	17.66	17.65	17.64	17.79	17.83	12.60	12.49	12.63	12.63	12.44
2.4GHz 802.11ax SU	17.20	17.15	17.21	17.18	17.16	12.36	12.51	12.52	12.44	12.43
2.4GHz Bluetooth	16.55	16.52	16.49	16.49	16.54	9.98	9.93	9.95	9.85	9.97
5GHz 802.11a	17.09	17.18	17.20	17.24	17.26	8.18	8.29	8.32	8.36	8.25
5GHz 802.11n 20MHz	16.99	17.08	17.06	17.09	16.98	7.92	7.88	7.81	7.99	7.87
5GHz 802.11ac 20MHz	16.94	16.81	16.92	16.92	16.88	7.97	7.99	7.95	8.11	7.98
5GHz 802.11ax 20MHz SU	17.65	17.74	17.65	17.79	17.63	7.98	8.09	8.06	8.10	8.00
5GHz 802.11n 40MHz	16.21	16.15	16.08	16.15	16.23	8.15	7.98	8.03	8.06	8.06
5GHz 802.11ac 40MHz	16.14	16.12	16.23	16.20	16.26	7.46	7.60	7.49	7.48	7.61
5GHz 802.11ax 40MHz SU	16.14	16.15	16.06	16.05	16.17	8.02	7.98	8.10	7.96	8.04
5GHz 802.11ac 80MHz	14.89	14.83	14.99	14.98	14.98	8.81	8.72	8.85	8.85	8.88
5GH 802.11ax 80MHz SU	15.24	15.17	15.25	15.26	15.16	8.03	8.16	8.15	8.05	8.18
5GHz 802.11ac 160MHz	11.53	11.54	11.48	11.42	11.47	8.07	7.97	8.08	7.92	7.96
5GHz 802.11ax 160MHz SU	11.71	11.70	11.71	11.72	11.58	8.07	8.04	8.02	8.01	8.01
6GHz 802.11a	9.79	9.83	9.84	9.76	9.93	8.85	8.72	8.79	8.83	8.87
6GHz 802.11ax 20MHz	9.61	9.55	9.69	9.71	9.60	8.60	8.56	8.60	8.71	8.55
6GHZ 802.11ax 40MHz	8.96	8.96	9.11	9.10	9.13	7.16	7.09	7.07	7.06	7.05
6GHz 802.11ax 80MHz	8.99	9.15	8.96	9.06	9.02	7.90	7.74	7.91	7.84	7.80
6GHz 802.11ax 160MHz	9.08	9.01	8.96	9.07	9.05	7.95	7.96	7.88	7.81	7.99

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

Mode	Distance to DUT Output power (dBm)									
	21	22	23	24	25	26	27	28	29	30
2.4GHz 802.11g	12.85	12.79	12.94	12.76	12.87	17.94	18.07	17.97	18.10	17.94
2.4GHz 802.11b	12.76	12.62	12.59	12.60	12.77	17.85	17.93	17.89	17.94	17.90
2.4GHz 802.11n	12.45	12.60	12.59	12.58	12.47	17.84	17.80	17.84	17.67	17.72
2.4GHz 802.11ax SU	12.37	12.55	12.52	12.44	12.54	17.11	17.13	17.08	17.13	17.07
2.4GHz Bluetooth	9.85	9.98	9.91	9.84	9.90	16.55	16.51	16.51	16.47	16.57
5GHz 802.11a	8.21	8.36	8.30	8.30	8.36	17.21	17.14	17.07	17.21	17.13
5GHz 802.11n 20MHz	7.95	7.86	7.92	7.88	7.88	16.93	16.97	17.10	16.98	17.13
5GHz 802.11ac 20MHz	8.11	7.96	8.12	8.10	8.06	16.86	16.82	16.85	16.89	16.93
5GHz 802.11ax 20MHz SU	8.08	8.05	7.91	8.04	8.03	17.76	17.68	17.69	17.72	17.67
5GHz 802.11n 40MHz	7.95	8.03	8.01	8.05	8.05	16.18	16.11	16.09	16.18	16.23
5GHz 802.11ac 40MHz	7.42	7.47	7.45	7.45	7.58	16.19	16.17	16.10	16.26	16.14
5GHz 802.11ax 40MHz SU	7.97	8.11	8.12	7.95	7.95	16.23	16.10	16.12	16.12	16.22
5GHz 802.11ac 80MHz	8.75	8.87	8.78	8.73	8.82	14.87	14.89	14.92	15.03	14.92
5GH 802.11ax 80MHz SU	8.03	8.13	8.14	8.03	8.19	15.16	15.12	15.12	15.29	15.30
5GHz 802.11ac 160MHz	7.93	7.94	7.92	7.98	7.94	11.58	11.54	11.47	11.44	11.46
5GHz 802.11ax 160MHz SU	8.19	8.15	8.19	8.12	8.12	11.57	11.67	11.69	11.64	11.63
6GHz 802.11a	8.87	8.77	8.73	8.90	8.80	9.81	9.78	9.90	9.80	9.85
6GHz 802.11ax 20MHz	8.71	8.61	8.67	8.62	8.59	9.57	9.65	9.63	9.73	9.71
6GHZ 802.11ax 40MHz	7.09	7.10	7.06	7.02	7.15	9.05	8.98	8.95	9.05	8.96
6GHz 802.11ax 80MHz	7.84	7.74	7.76	7.89	7.90	9.05	9.15	9.11	9.08	9.13
6GHz 802.11ax 160MHz	7.90	7.87	7.86	7.87	7.89	9.03	9.08	8.99	9.04	9.04

Based on the most conservative measured triggering distance of 24mm, additional Body SAR measurements were required at 23mm from top side for the above modes.

3.1 Proximity Sensor Coverage for SAR measurements

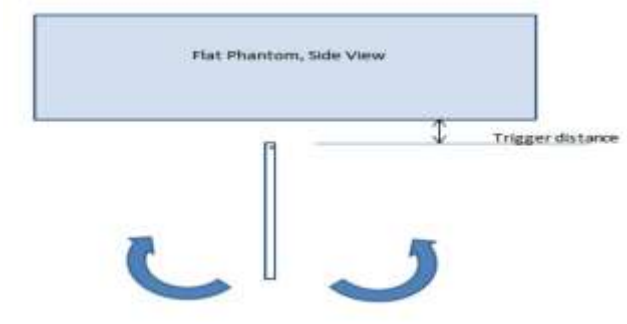
(KDB 616217 D04v01r02 §6.3)

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

3.2 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 ±45°. 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 ±45°.



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

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

Band (MHz)	Minimum distance at which power reduction was maintained over-45°	Power reduction status										
		-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
2450 MHz	24 mm	On	On	On	On	On	On	On	On	On	On	On
5000 MHz	24 mm	On	On	On	On	On	On	On	On	On	On	On
6500MHz	24 mm	On	On	On	On	On	On	On	On	On	On	On

3.3 Resulting test positions for Body SAR measurements

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR [mm]
WLAN 1 Ant	Rear	20	N/A	N/A	19
	Right	8	N/A	N/A	7
	Right Corner	9	N/A	N/A	8
	Top	24	N/A	N/A	23

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 proximity use conditions.

4. Power reduction Verification for WLAN 2 Ant

This device uses a power reduction mechanism for SAR compliance for WLAN operations during Grip sensor is activated.

Mechanism(s)	Mode/Band	Un-triggered (Max Power)	Mechanism 1: (Reduced Power)
Grip	2.4GHz 802.11g	17.60	12.64
Grip	2.4GHz 802.11b	17.54	12.48
Grip	2.4GHz 802.11n	17.41	12.26
Grip	2.4GHz 802.11ax SU	16.81	12.17
Grip	2.4GHz Bluetooth	16.12	9.57
Grip	5GHz 802.11a	16.81	8.01
Grip	5GHz 802.11n 20MHz	16.73	7.61
Grip	5GHz 802.11ac 20MHz	16.54	7.73
Grip	5GHz 802.11ax 20MHz SU	17.42	7.81
Grip	5GHz 802.11n 40MHz	15.84	7.84
Grip	5GHz 802.11ac 40MHz	15.87	7.27
Grip	5GHz 802.11ax 40MHz SU	15.81	7.71
Grip	5GHz 802.11ac 80MHz	14.93	8.53
Grip	5GH 802.11ax 80MHz SU	14.88	7.82
Grip	5GHz 802.11ac 160MHz	11.23	7.86
Grip	5GHz 802.11ax 160MHz SU	11.31	7.84
Grip	6GHz 802.11a	9.65	8.61
Grip	GHz 802.11ax 20MHz	9.47	8.50
Grip	6GHZ 802.11ax 40MHz	8.79	7.51
Grip	6GHz 802.11ax 80MHz	8.78	7.53
Grip	6GHz 802.11ax 160MHz	8.76	7.62

Mechanism(s)	Mode/Band	Un-triggered (Max Power)	Mechanism 1: (Reduced Power)
mmWave,Sub6,RSDB active	2.4GHz 802.11g	17.60	10.64
mmWave,Sub6,RSDB active	2.4GHz 802.11b	17.54	10.51
mmWave,Sub6,RSDB active	2.4GHz 802.11n	17.41	10.38
mmWave,Sub6,RSDB active	2.4GHz 802.11ax SU	16.81	10.21
mmWave,Sub6,RSDB active	2.4GHz Bluetooth	16.12	8.02
mmWave,Sub6,RSDB active	5GHz 802.11a	16.81	5.78
mmWave,Sub6,RSDB active	5GHz 802.11n 20MHz	16.73	5.46
mmWave,Sub6,RSDB active	5GHz 802.11ac 20MHz	16.54	5.41
mmWave,Sub6,RSDB active	5GHz 802.11ax 20MHz SU	17.42	6.53
mmWave,Sub6,RSDB active	5GHz 802.11n 40MHz	15.84	6.41
mmWave,Sub6,RSDB active	5GHz 802.11ac 40MHz	15.87	6.42
mmWave,Sub6,RSDB active	5GHz 802.11ax 40MHz SU	15.81	6.22
mmWave,Sub6,RSDB active	5GHz 802.11ac 80MHz	14.93	6.02
mmWave,Sub6,RSDB active	5GH 802.11ax 80MHz SU	14.88	6.02
mmWave,Sub6,RSDB active	5GHz 802.11ac 160MHz	11.23	6.01
mmWave,Sub6,RSDB active	5GHz 802.11ax 160MHz SU	11.31	6.12
mmWave,Sub6,RSDB active	6GHz 802.11a	9.65	6.02
mmWave,Sub6,RSDB active	6GHz 802.11ax 20MHz	9.47	6.12
mmWave,Sub6,RSDB active	6GHZ 802.11ax 40MHz	8.79	5.52
mmWave,Sub6,RSDB active	6GHz 802.11ax 80MHz	8.78	5.51
mmWave,Sub6,RSDB active	6GHz 802.11ax 160MHz	8.76	5.53

Tissue simulating liquid	Trigger distance – Rear		Trigger distance – Left Side		Trigger distance – Left Corner Side		Trigger distance – Top	
	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]	Moving toward phantom [mm]	Moving away from phantom [mm]
2450MHz	18	19	8	9	9	10	21	22
5000MHz	18	19	8	9	9	10	21	22
6500MHz	18	19	8	9	9	10	21	22

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

Mode	Distance to DUT Output power (dBm)									
	23	22	21	20	19	18	17	16	15	14
2.4GHz 802.11g	17.70	17.55	17.70	17.61	17.55	12.62	12.64	12.68	12.66	12.58
2.4GHz 802.11b	17.56	17.55	17.53	17.56	17.58	12.57	12.46	12.41	12.38	12.51
2.4GHz 802.11n	17.45	17.43	17.49	17.46	17.35	12.17	12.28	12.33	12.20	12.16
2.4GHz 802.11ax SU	16.82	16.73	16.91	16.84	16.86	12.12	12.08	12.10	12.24	12.10
2.4GHz Bluetooth	16.08	16.05	16.05	16.11	16.14	9.59	9.61	9.48	9.59	9.61
5GHz 802.11a	16.90	16.72	16.82	16.78	16.75	8.04	7.91	8.02	7.97	8.09
5GHz 802.11n 20MHz	16.71	16.63	16.65	16.78	16.79	7.53	7.61	7.65	7.59	7.71
5GHz 802.11ac 20MHz	16.47	16.46	16.52	16.61	16.58	7.71	7.65	7.81	7.74	7.79
5GHz 802.11ax 20MHz SU	17.38	17.50	17.38	17.41	17.35	7.78	7.80	7.86	7.86	7.73
5GHz 802.11n 40MHz	15.78	15.74	15.80	15.84	15.90	7.89	7.84	7.80	7.85	7.84
5GHz 802.11ac 40MHz	15.89	15.84	15.96	15.79	15.79	7.24	7.27	7.36	7.29	7.36
5GHz 802.11ax 40MHz SU	15.84	15.73	15.84	15.79	15.85	7.66	7.70	7.72	7.63	7.63
5GHz 802.11ac 80MHz	14.97	14.87	15.00	14.90	14.91	8.60	8.55	8.45	8.44	8.59
5GH 802.11ax 80MHz SU	14.86	14.86	14.88	14.96	14.80	7.92	7.87	7.86	7.76	7.85
5GHz 802.11ac 160MHz	11.16	11.27	11.13	11.31	11.28	7.89	7.90	7.85	7.88	7.83
5GHz 802.11ax 160MHz SU	11.39	11.27	11.38	11.40	11.35	7.91	7.83	7.79	7.94	7.74
6GHz 802.11a	9.55	9.56	9.68	9.74	9.57	8.64	8.63	8.59	8.66	8.65
6GHz 802.11ax 20MHz	9.53	9.41	9.49	9.47	9.49	8.48	8.44	8.50	8.53	8.53
6GHZ 802.11ax 40MHz	8.89	8.71	8.74	8.87	8.72	7.50	7.46	7.59	7.53	7.43
6GHz 802.11ax 80MHz	8.76	8.78	8.76	8.85	8.78	7.48	7.54	7.49	7.43	7.48
6GHz 802.11ax 160MHz	8.80	8.66	8.67	8.73	8.80	7.56	7.62	7.66	7.58	7.64

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

Mode	Distance to DUT Output power (dBm)									
	15	16	17	18	19	20	21	22	23	24
2.4GHz 802.11g	12.58	12.68	12.56	12.66	12.55	17.50	17.64	17.67	17.59	17.66
2.4GHz 802.11b	12.39	12.49	12.55	12.43	12.44	17.58	17.56	17.53	17.61	17.52
2.4GHz 802.11n	12.16	12.18	12.18	12.27	12.20	17.35	17.49	17.42	17.31	17.38
2.4GHz 802.11ax SU	12.12	12.25	12.10	12.27	12.17	16.90	16.87	16.75	16.79	16.89
2.4GHz Bluetooth	9.51	9.57	9.56	9.53	9.67	16.08	16.09	16.10	16.13	16.02
5GHz 802.11a	7.97	8.05	8.11	7.94	7.94	16.76	16.88	16.91	16.89	16.84
5GHz 802.11n 20MHz	7.60	7.56	7.60	7.71	7.52	16.65	16.78	16.69	16.74	16.74
5GHz 802.11ac 20MHz	7.79	7.81	7.81	7.81	7.70	16.64	16.52	16.48	16.64	16.56
5GHz 802.11ax 20MHz SU	7.74	7.76	7.82	7.88	7.71	17.52	17.43	17.46	17.42	17.35
5GHz 802.11n 40MHz	7.75	7.91	7.81	7.77	7.77	15.83	15.84	15.77	15.89	15.82
5GHz 802.11ac 40MHz	7.32	7.31	7.28	7.27	7.19	15.78	15.89	15.97	15.92	15.84
5GHz 802.11ax 40MHz SU	7.68	7.70	7.66	7.74	7.62	15.91	15.83	15.91	15.76	15.88
5GHz 802.11ac 80MHz	8.56	8.60	8.61	8.59	8.61	14.96	14.91	14.89	15.00	14.95
5GH 802.11ax 80MHz SU	7.83	7.74	7.81	7.82	7.87	14.82	14.83	14.92	14.80	14.88
5GHz 802.11ac 160MHz	7.96	7.78	7.90	7.88	7.92	11.31	11.27	11.31	11.16	11.31
5GHz 802.11ax 160MHz SU	7.89	7.90	7.81	7.90	7.86	11.40	11.28	11.21	11.32	11.26
6GHz 802.11a	8.53	8.52	8.69	8.65	8.70	9.65	9.63	9.61	9.61	9.64
6GHz 802.11ax 20MHz	8.53	8.42	8.59	8.49	8.57	9.54	9.37	9.47	9.54	9.55
6GHZ 802.11ax 40MHz	7.46	7.45	7.45	7.53	7.46	8.71	8.69	8.88	8.83	8.85
6GHz 802.11ax 80MHz	7.51	7.55	7.54	7.63	7.62	8.86	8.77	8.78	8.77	8.85
6GHz 802.11ax 160MHz	7.55	7.67	7.63	7.69	7.53	8.72	8.67	8.72	8.80	8.83

Based on the most conservative measured triggering distance of 18mm, additional Body SAR measurements were required at 17mm from rear side for the above modes.

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

Mode	Distance to DUT Output power (dBm)									
	13	12	11	10	9	8	7	6	5	4
2.4GHz 802.11g	17.67	17.67	17.70	17.63	17.67	12.62	12.56	12.67	12.65	12.63
2.4GHz 802.11b	17.46	17.52	17.64	17.58	17.48	12.44	12.41	12.51	12.53	12.49
2.4GHz 802.11n	17.39	17.34	17.31	17.40	17.31	12.18	12.27	12.25	12.28	12.18
2.4GHz 802.11ax SU	16.72	16.88	16.91	16.82	16.78	12.17	12.27	12.20	12.19	12.27
2.4GHz Bluetooth	16.19	16.06	16.18	16.12	16.17	9.62	9.63	9.65	9.62	9.54
5GHz 802.11a	16.91	16.82	16.72	16.86	16.87	7.91	8.11	7.92	7.99	7.91
5GHz 802.11n 20MHz	16.79	16.68	16.76	16.81	16.75	7.63	7.54	7.63	7.60	7.68
5GHz 802.11ac 20MHz	16.62	16.62	16.51	16.60	16.61	7.69	7.66	7.64	7.74	7.74
5GHz 802.11ax 20MHz SU	17.34	17.51	17.37	17.49	17.46	7.84	7.80	7.77	7.73	7.75
5GHz 802.11n 40MHz	15.77	15.75	15.90	15.79	15.93	7.89	7.76	7.90	7.88	7.84
5GHz 802.11ac 40MHz	15.93	15.77	15.86	15.79	15.95	7.22	7.22	7.26	7.31	7.24
5GHz 802.11ax 40MHz SU	15.73	15.82	15.78	15.84	15.74	7.61	7.77	7.67	7.67	7.78
5GHz 802.11ac 80MHz	14.95	14.97	14.89	14.91	14.86	8.62	8.50	8.43	8.43	8.63
5GH 802.11ax 80MHz SU	14.98	14.83	14.78	14.90	14.86	7.73	7.88	7.84	7.77	7.90
5GHz 802.11ac 160MHz	11.27	11.27	11.30	11.27	11.33	7.85	7.96	7.90	7.86	7.79
5GHz 802.11ax 160MHz SU	11.39	11.30	11.26	11.30	11.32	7.87	7.82	7.90	7.94	7.89
6GHz 802.11a	9.56	9.58	9.72	9.59	9.55	8.66	8.55	8.63	8.70	8.61
6GHz 802.11ax 20MHz	9.51	9.43	9.44	9.40	9.46	8.59	8.41	8.42	8.43	8.46
6GHZ 802.11ax 40MHz	8.83	8.87	8.88	8.80	8.75	7.43	7.49	7.44	7.50	7.59
6GHz 802.11ax 80MHz	8.70	8.77	8.82	8.68	8.78	7.43	7.60	7.63	7.56	7.47
6GHz 802.11ax 160MHz	8.86	8.67	8.67	8.85	8.78	7.58	7.72	7.70	7.60	7.61

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

Mode	Distance to DUT Output power (dBm)									
	5	6	7	8	9	10	11	12	13	14
2.4GHz 802.11g	12.64	12.70	12.55	12.54	12.57	17.67	17.54	17.60	17.65	17.53
2.4GHz 802.11b	12.48	12.51	12.38	12.55	12.39	17.52	17.58	17.52	17.50	17.61
2.4GHz 802.11n	12.30	12.32	12.36	12.35	12.18	17.47	17.45	17.39	17.33	17.45
2.4GHz 802.11ax SU	12.21	12.13	12.21	12.19	12.21	16.71	16.74	16.71	16.84	16.85
2.4GHz Bluetooth	9.57	9.60	9.66	9.48	9.65	16.15	16.02	16.11	16.13	16.11
5GHz 802.11a	8.02	8.05	7.97	7.97	7.96	16.75	16.82	16.78	16.71	16.78
5GHz 802.11n 20MHz	7.68	7.70	7.68	7.54	7.64	16.75	16.75	16.76	16.72	16.65
5GHz 802.11ac 20MHz	7.65	7.70	7.80	7.70	7.76	16.47	16.57	16.49	16.51	16.44
5GHz 802.11ax 20MHz SU	7.86	7.80	7.88	7.84	7.80	17.47	17.46	17.42	17.40	17.40
5GHz 802.11n 40MHz	7.94	7.84	7.92	7.90	7.86	15.80	15.89	15.92	15.79	15.81
5GHz 802.11ac 40MHz	7.17	7.21	7.33	7.29	7.19	15.95	15.89	15.89	15.96	15.89
5GHz 802.11ax 40MHz SU	7.71	7.70	7.61	7.73	7.62	15.76	15.80	15.83	15.87	15.83
5GHz 802.11ac 80MHz	8.60	8.48	8.49	8.59	8.58	15.03	14.89	14.87	14.97	14.98
5GH 802.11ax 80MHz SU	7.79	7.77	7.83	7.90	7.87	14.91	14.79	14.91	14.83	14.97
5GHz 802.11ac 160MHz	7.83	7.88	7.96	7.86	7.96	11.16	11.17	11.32	11.16	11.16
5GHz 802.11ax 160MHz SU	7.78	7.87	7.76	7.81	7.88	11.39	11.28	11.23	11.21	11.41
6GHz 802.11a	8.54	8.64	8.60	8.51	8.70	9.73	9.69	9.69	9.60	9.69
6GHz 802.11ax 20MHz	8.46	8.49	8.58	8.49	8.50	9.51	9.38	9.50	9.43	9.48
6GHZ 802.11ax 40MHz	7.43	7.46	7.43	7.47	7.47	8.69	8.75	8.84	8.74	8.83
6GHz 802.11ax 80MHz	7.43	7.46	7.50	7.51	7.55	8.81	8.69	8.77	8.77	8.74
6GHz 802.11ax 160MHz	7.57	7.53	7.60	7.58	7.65	8.83	8.77	8.70	8.84	8.80

Based on the most conservative measured triggering distance of 8mm, additional Body SAR measurements were required at 7mm from left side for the above modes.

Left Corner side – EUT Moving toward (trigger) to the Phantom

Mode	Distance to DUT Output power (dBm)									
	14	13	12	11	10	9	8	7	6	5
2.4GHz 802.11g	17.70	17.53	17.60	17.50	17.69	12.74	12.57	12.72	12.63	12.67
2.4GHz 802.11b	17.46	17.52	17.50	17.46	17.48	12.44	12.56	12.42	12.46	12.40
2.4GHz 802.11n	17.39	17.39	17.47	17.37	17.48	12.18	12.23	12.28	12.22	12.18
2.4GHz 802.11ax SU	16.88	16.75	16.88	16.81	16.82	12.24	12.10	12.11	12.23	12.27
2.4GHz Bluetooth	16.12	16.22	16.16	16.12	16.18	9.60	9.53	9.47	9.56	9.64
5GHz 802.11a	16.81	16.73	16.88	16.78	16.78	7.95	8.05	7.98	8.11	7.94
5GHz 802.11n 20MHz	16.65	16.82	16.81	16.68	16.64	7.63	7.54	7.59	7.69	7.68
5GHz 802.11ac 20MHz	16.54	16.52	16.48	16.52	16.54	7.74	7.75	7.78	7.72	7.83
5GHz 802.11ax 20MHz SU	17.36	17.45	17.48	17.37	17.42	7.87	7.89	7.82	7.80	7.87
5GHz 802.11n 40MHz	15.78	15.85	15.79	15.74	15.74	7.93	7.89	7.90	7.75	7.78
5GHz 802.11ac 40MHz	15.92	15.91	15.81	15.95	15.95	7.22	7.21	7.36	7.26	7.34
5GHz 802.11ax 40MHz SU	15.79	15.74	15.76	15.84	15.90	7.66	7.80	7.66	7.62	7.74
5GHz 802.11ac 80MHz	14.96	14.86	14.85	14.84	14.95	8.60	8.45	8.50	8.44	8.58
5GH 802.11ax 80MHz SU	14.89	14.85	14.82	14.84	14.92	7.81	7.72	7.72	7.73	7.74
5GHz 802.11ac 160MHz	11.27	11.20	11.18	11.30	11.20	7.95	7.93	7.78	7.88	7.92
5GHz 802.11ax 160MHz SU	11.31	11.37	11.39	11.32	11.24	7.83	7.91	7.77	7.82	7.90
6GHz 802.11a	9.74	9.61	9.55	9.64	9.59	8.53	8.53	8.58	8.66	8.69
6GHz 802.11ax 20MHz	9.56	9.52	9.57	9.42	9.39	8.40	8.56	8.50	8.49	8.55
6GHZ 802.11ax 40MHz	8.84	8.80	8.79	8.70	8.71	7.61	7.48	7.51	7.47	7.43
6GHz 802.11ax 80MHz	8.68	8.79	8.85	8.70	8.71	7.47	7.59	7.58	7.56	7.46
6GHz 802.11ax 160MHz	8.71	8.83	8.81	8.72	8.80	7.68	7.53	7.60	7.65	7.71

Left Corner side – EUT Moving away (Release) from the Phantom

Mode	Distance to DUT Output power (dBm)									
	6	7	8	9	10	11	12	13	14	15
2.4GHz 802.11g	12.67	12.64	12.73	12.59	12.61	17.70	17.56	17.66	17.58	17.53
2.4GHz 802.11b	12.40	12.54	12.49	12.47	12.47	17.54	17.46	17.53	17.49	17.57
2.4GHz 802.11n	12.18	12.24	12.32	12.35	12.20	17.44	17.44	17.45	17.40	17.38
2.4GHz 802.11ax SU	12.20	12.13	12.13	12.21	12.26	16.88	16.75	16.75	16.75	16.77
2.4GHz Bluetooth	9.54	9.60	9.60	9.55	9.57	16.11	16.16	16.21	16.12	16.11
5GHz 802.11a	8.01	8.07	7.97	8.10	7.91	16.82	16.79	16.79	16.80	16.84
5GHz 802.11n 20MHz	7.63	7.62	7.70	7.53	7.67	16.82	16.73	16.68	16.73	16.63
5GHz 802.11ac 20MHz	7.65	7.74	7.68	7.76	7.71	16.53	16.56	16.55	16.48	16.64
5GHz 802.11ax 20MHz SU	7.76	7.73	7.82	7.81	7.74	17.52	17.33	17.47	17.51	17.33
5GHz 802.11n 40MHz	7.80	7.82	7.78	7.78	7.75	15.81	15.78	15.78	15.88	15.81
5GHz 802.11ac 40MHz	7.29	7.37	7.18	7.36	7.37	15.86	15.79	15.83	15.88	15.86
5GHz 802.11ax 40MHz SU	7.64	7.72	7.79	7.62	7.74	15.71	15.89	15.85	15.86	15.74
5GHz 802.11ac 80MHz	8.58	8.59	8.63	8.57	8.54	14.91	14.98	14.97	14.98	14.85
5GH 802.11ax 80MHz SU	7.74	7.72	7.81	7.72	7.78	14.92	14.86	14.90	14.86	14.84
5GHz 802.11ac 160MHz	7.79	7.93	7.92	7.79	7.94	11.30	11.22	11.13	11.32	11.27
5GHz 802.11ax 160MHz SU	7.89	7.79	7.85	7.94	7.83	11.23	11.31	11.27	11.22	11.29
6GHz 802.11a	8.67	8.63	8.51	8.58	8.64	9.68	9.66	9.65	9.69	9.70
6GHz 802.11ax 20MHz	8.51	8.52	8.47	8.49	8.49	9.53	9.37	9.40	9.51	9.54
6GHZ 802.11ax 40MHz	7.49	7.58	7.45	7.59	7.57	8.69	8.81	8.80	8.75	8.74
6GHz 802.11ax 80MHz	7.63	7.43	7.55	7.43	7.48	8.87	8.70	8.70	8.74	8.68
6GHz 802.11ax 160MHz	7.58	7.70	7.56	7.52	7.53	8.82	8.81	8.80	8.78	8.76

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

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

Mode	Distance to DUT Output power (dBm)									
	26	25	24	23	22	21	20	19	18	17
2.4GHz 802.11g	17.62	17.57	17.50	17.57	17.70	12.54	12.57	12.55	12.57	12.66
2.4GHz 802.11b	17.49	17.49	17.53	17.62	17.61	12.49	12.38	12.48	12.56	12.38
2.4GHz 802.11n	17.33	17.32	17.36	17.41	17.35	12.35	12.19	12.24	12.16	12.36
2.4GHz 802.11ax SU	16.73	16.82	16.78	16.80	16.82	12.18	12.27	12.27	12.11	12.26
2.4GHz Bluetooth	16.17	16.21	16.05	16.08	16.10	9.66	9.63	9.54	9.61	9.58
5GHz 802.11a	16.72	16.74	16.78	16.84	16.82	7.97	8.07	8.03	8.02	8.00
5GHz 802.11n 20MHz	16.81	16.74	16.71	16.72	16.74	7.56	7.67	7.66	7.55	7.61
5GHz 802.11ac 20MHz	16.50	16.62	16.61	16.48	16.47	7.64	7.67	7.68	7.76	7.68
5GHz 802.11ax 20MHz SU	17.37	17.36	17.41	17.37	17.43	7.77	7.87	7.74	7.77	7.76
5GHz 802.11n 40MHz	15.82	15.92	15.89	15.86	15.85	7.88	7.88	7.76	7.92	7.79
5GHz 802.11ac 40MHz	15.90	15.95	15.77	15.96	15.86	7.20	7.35	7.18	7.27	7.18
5GHz 802.11ax 40MHz SU	15.71	15.79	15.82	15.78	15.85	7.75	7.77	7.76	7.63	7.75
5GHz 802.11ac 80MHz	14.93	15.00	14.83	14.94	14.98	8.58	8.62	8.51	8.56	8.43
5GH 802.11ax 80MHz SU	14.84	14.83	14.86	14.80	14.90	7.74	7.82	7.82	7.80	7.85
5GHz 802.11ac 160MHz	11.30	11.13	11.19	11.14	11.18	7.81	7.82	7.92	7.79	7.79
5GHz 802.11ax 160MHz SU	11.40	11.27	11.41	11.27	11.22	7.90	7.75	7.89	7.79	7.91
6GHz 802.11a	9.65	9.58	9.68	9.71	9.68	8.58	8.61	8.53	8.56	8.68
6GHz 802.11ax 20MHz	9.40	9.51	9.49	9.57	9.49	8.48	8.41	8.42	8.40	8.53
6GHZ 802.11ax 40MHz	8.75	8.80	8.86	8.86	8.85	7.54	7.48	7.42	7.46	7.42
6GHz 802.11ax 80MHz	8.68	8.88	8.77	8.68	8.82	7.50	7.45	7.43	7.61	7.61
6GHz 802.11ax 160MHz	8.69	8.76	8.70	8.77	8.69	7.61	7.64	7.61	7.66	7.55

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

Mode	Distance to DUT Output power (dBm)									
	18	19	20	21	22	23	24	25	26	27
2.4GHz 802.11g	12.58	12.54	12.74	12.71	12.59	17.51	17.65	17.61	17.63	17.70
2.4GHz 802.11b	12.44	12.56	12.40	12.49	12.55	17.47	17.44	17.56	17.56	17.58
2.4GHz 802.11n	12.17	12.31	12.20	12.19	12.32	17.39	17.46	17.47	17.46	17.51
2.4GHz 802.11ax SU	12.11	12.17	12.20	12.24	12.25	16.83	16.72	16.74	16.79	16.71
2.4GHz Bluetooth	9.61	9.61	9.62	9.52	9.48	16.15	16.17	16.20	16.08	16.04
5GHz 802.11a	7.96	7.95	7.99	8.06	8.03	16.88	16.86	16.83	16.78	16.81
5GHz 802.11n 20MHz	7.66	7.52	7.56	7.69	7.67	16.66	16.74	16.78	16.74	16.78
5GHz 802.11ac 20MHz	7.63	7.77	7.64	7.70	7.80	16.46	16.61	16.50	16.48	16.46
5GHz 802.11ax 20MHz SU	7.90	7.88	7.81	7.74	7.75	17.41	17.34	17.35	17.50	17.43
5GHz 802.11n 40MHz	7.77	7.75	7.77	7.75	7.90	15.93	15.85	15.92	15.76	15.75
5GHz 802.11ac 40MHz	7.27	7.18	7.23	7.32	7.24	15.87	15.96	15.93	15.88	15.91
5GHz 802.11ax 40MHz SU	7.62	7.65	7.71	7.63	7.81	15.80	15.75	15.71	15.79	15.77
5GHz 802.11ac 80MHz	8.55	8.44	8.58	8.56	8.61	14.97	15.03	14.85	15.03	15.03
5GH 802.11ax 80MHz SU	7.84	7.83	7.90	7.75	7.77	14.85	14.86	14.83	14.84	14.90
5GHz 802.11ac 160MHz	7.84	7.95	7.89	7.76	7.90	11.26	11.25	11.33	11.23	11.29
5GHz 802.11ax 160MHz SU	7.86	7.93	7.91	7.75	7.77	11.37	11.41	11.36	11.34	11.40
6GHz 802.11a	8.58	8.64	8.66	8.68	8.61	9.56	9.73	9.71	9.60	9.56
6GHz 802.11ax 20MHz	8.43	8.49	8.41	8.55	8.42	9.50	9.56	9.54	9.37	9.56
6GHZ 802.11ax 40MHz	7.51	7.52	7.51	7.51	7.47	8.74	8.70	8.75	8.80	8.76
6GHz 802.11ax 80MHz	7.43	7.51	7.62	7.45	7.47	8.79	8.78	8.81	8.74	8.77
6GHz 802.11ax 160MHz	7.63	7.72	7.53	7.61	7.72	8.77	8.85	8.81	8.70	8.70

Based on the most conservative measured triggering distance of 21mm, additional Body SAR measurements were required at 20mm from top side for the above modes.

4.1 Proximity Sensor Coverage for SAR measurements

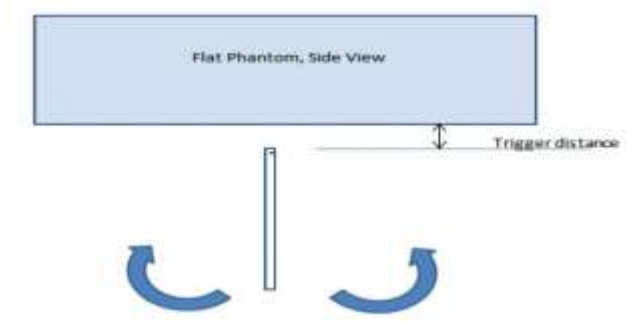
(KDB 616217 D04v01r02 §6.3)

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

4.2 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 ±45°. 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 ±45°.



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

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

Band (MHz)	Minimum distance at which power reduction was maintained over-45°	Power reduction status										
		-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
2450 MHz	21 mm	On	On	On	On	On	On	On	On	On	On	On
5000 MHz	21 mm	On	On	On	On	On	On	On	On	On	On	On
6500 MHz	21 mm	On	On	On	On	On	On	On	On	On	On	On

4.3 Resulting test positions for Body SAR measurements

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR [mm]
WLAN 2 Ant	Rear	18	N/A	N/A	17
	Left	8	N/A	N/A	7
	Left Corner	9	N/A	N/A	8
	Top	21	N/A	N/A	20

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 proximity use conditions.

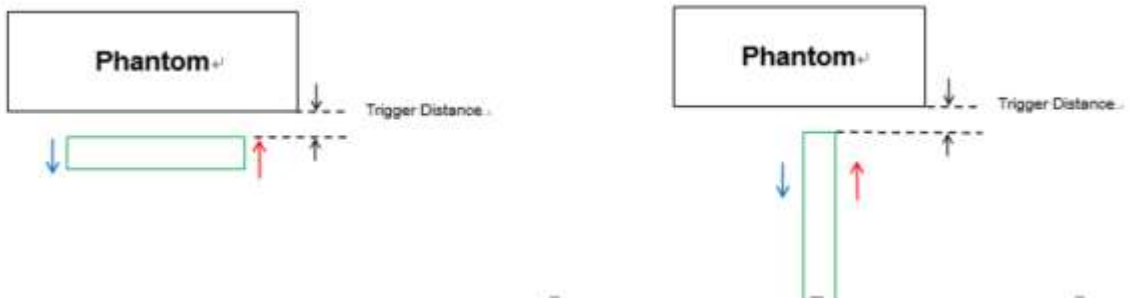
5. Power reduction Verification for Sub 1 Ant

This device utilizes a power reduction mechanism for some wireless modes under some conditions when the device is being used in close proximity to the user's hand for Sub 1 Ant
FCC KDB Publication 616217D04v01r02 section 6 was used as a guideline for selection SAR test distances for this device when being used in Proximity use conditions.

Mechanism(s)	Mode/Band	Device State Index	
		Un-triggered (Max Power)	Triggered (Reduced Power)
Grip	LTE Band 2	DSI 0	DSI 1
Grip	LTE Band 7	DSI 0	DSI 1
Grip	LTE Band 66	DSI 0	DSI 1

Note: This device uses different Device State Indices(DSI) to configure different time averaged power level based on certain exposure scenarios. For this model, DSI=1 represents the case when the grip sensor is active, and DSI=0 represents the case where the device cannot detect the use condition.

5.2 Proximity sensor triggering Distance Verification.



Proximity Sensor Trigger Distance Assessment KDB 616217 D04 §6.2 (Rear / Right / 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 – Right Side		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]
1750 MHz	18	19	8	9	24	25
1900 MHz	18	19	8	9	24	25
2600 MHz	18	19	8	9	24	25

Distance Measurement verification for Proximity sensor

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

Distance	Distance to DUT Output power (dBm)									
	23	22	21	20	19	18	17	16	15	14
LTE Band 2	24.13	24.13	24.12	24.06	24.10	14.15	14.02	14.04	14.19	14.09
LTE Band 7	21.73	21.63	21.73	21.63	21.65	12.83	12.90	12.95	12.88	12.95
LTE Band 66	24.04	24.17	24.19	24.19	24.14	14.19	14.02	14.13	14.16	14.03

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

Distance	Distance to DUT Output power (dBm)									
	15	16	17	18	19	20	21	22	23	24
LTE Band 2	14.19	14.10	14.10	14.20	14.12	24.14	24.06	24.06	24.23	24.23
LTE Band 7	12.80	12.98	12.90	12.94	12.89	21.69	21.68	21.72	21.70	21.80
LTE Band 66	14.21	14.20	14.12	14.03	14.03	24.02	24.03	24.14	24.19	24.10

Based on the most conservative measured triggering distance of 18mm, additional Body SAR measurements were required at 17mm from top side for the above modes.

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

Distance	Distance to DUT Output power (dBm)									
	13	12	11	10	9	8	7	6	5	4
LTE Band 2	24.08	24.15	24.04	24.21	24.07	14.17	14.15	14.10	14.17	14.09
LTE Band 7	21.70	21.75	21.74	21.68	21.70	12.80	12.97	12.93	12.96	12.98
LTE Band 66	24.13	24.03	24.05	24.18	24.06	14.07	14.21	14.02	14.08	14.13

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

Distance	Distance to DUT Output power (dBm)									
	5	6	7	8	9	10	11	12	13	14
LTE Band 2	14.13	14.05	14.18	14.06	14.10	24.11	24.22	24.19	24.08	24.21
LTE Band 7	12.84	12.84	12.79	12.96	12.97	21.71	21.71	21.70	21.68	21.77
LTE Band 66	14.14	14.07	14.12	14.05	14.21	24.19	24.04	24.13	24.03	24.21

Based on the most conservative measured triggering distance of 8mm, additional Body SAR measurements were required at 7mm from top side for the above modes.

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

Distance	Distance to DUT Output power (dBm)									
	29	28	27	26	25	24	23	22	21	20
LTE Band 2	24.03	24.09	24.23	24.15	24.22	14.19	14.10	14.15	14.08	14.01
LTE Band 7	21.75	21.78	21.78	21.75	21.80	12.92	12.96	12.89	12.91	12.95
LTE Band 66	24.21	24.17	24.14	24.13	24.19	14.10	14.17	14.08	14.01	14.12

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

Distance	Distance to DUT Output power (dBm)									
	21	22	23	24	25	26	27	28	29	30
LTE Band 2	14.07	14.04	14.12	14.06	14.02	24.10	24.17	24.18	24.23	24.10
LTE Band 7	12.96	12.91	12.98	12.84	12.96	21.65	21.80	21.80	21.65	21.64
LTE Band 66	14.15	14.19	14.02	14.14	14.08	24.05	24.09	24.18	24.22	24.10

Based on the most conservative measured triggering distance of 24mm, additional Body SAR measurements were required at 23mm from top side for the above modes.

5.3 Proximity Sensor Coverage for SAR measurements

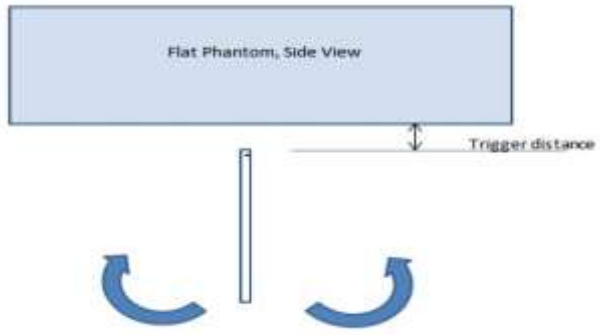
(KDB 616217 D04v01r02 §6.3)

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

5.4 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 ±45°. 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 ±45°.



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

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

Band (MHz)	Minimum distance at which power reduction was maintained over-45°	Power reduction status										
		-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
1750 MHz	24 mm	On	On	On	On	On	On	On	On	On	On	On
1900 MHz	24 mm	On	On	On	On	On	On	On	On	On	On	On
2600 MHz	24 mm	On	On	On	On	On	On	On	On	On	On	On

5.5 Resulting test positions for Body SAR measurements

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR [mm]
Sub 1 Ant	Rear	18	N/A	N/A	17
	Right Side	8	N/A	N/A	7
	Bottom	24	N/A	N/A	23

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 proximity use conditions.

Appendix I. – DL CA Power Measurement/ 5G NR Call Box Setup

1. LTE Down-link Carrier Aggregation Conducted Powers

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

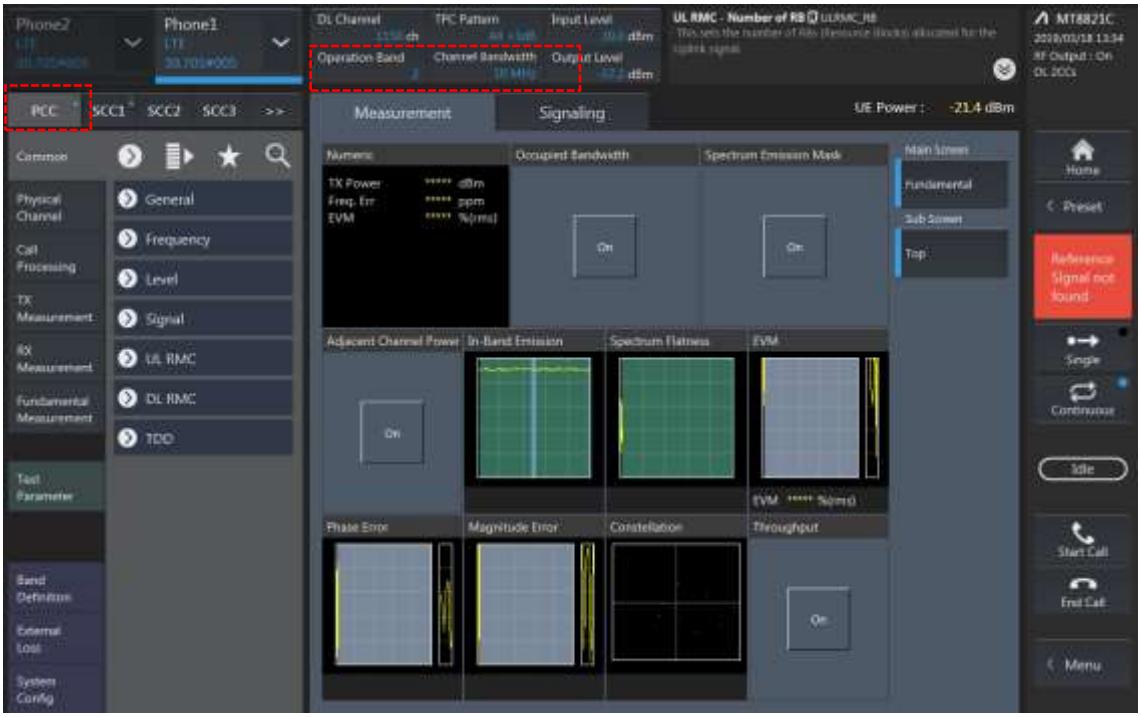
Downlink Carrier aggregation:

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

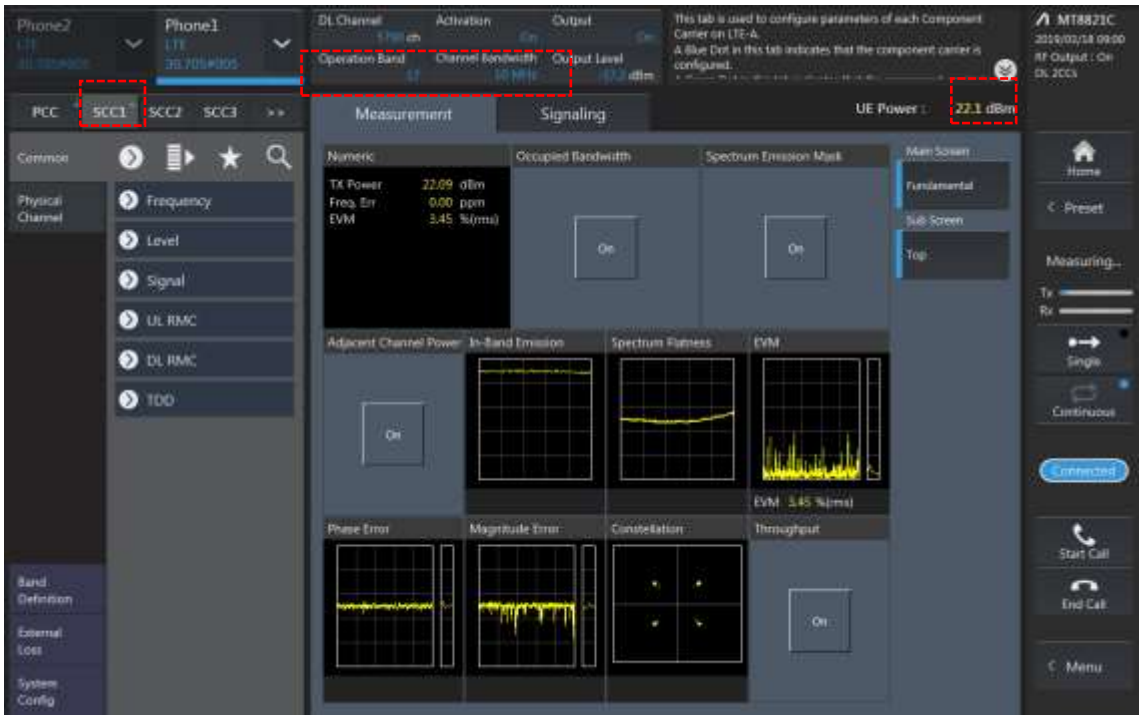
Power Measurement setup

LTE Down Link 2CA Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



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



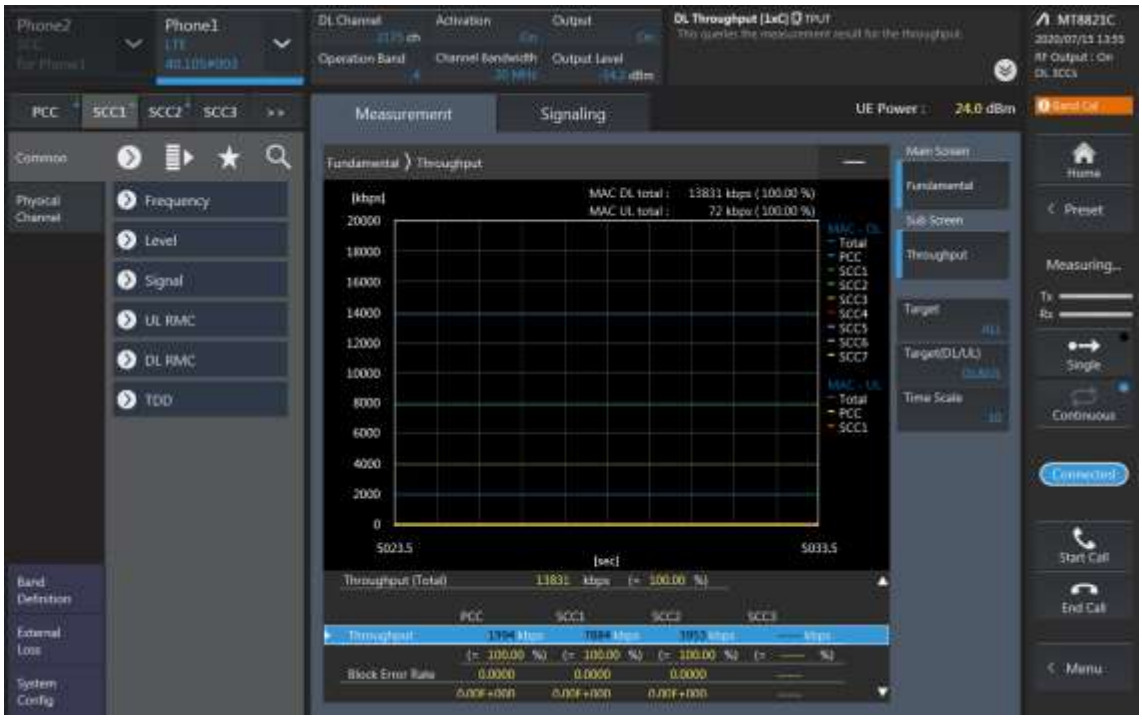
2CA Downlink Carrier aggregation Maximum conducted Powers

Combination	PCC									SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
25A-25A(0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8640	1990	24.56	24.48	-0.08
25A-25A(1)	25	15	26365	1882.5	8365	1962.5	QPSK	1	36	25	20	8590	1985	24.89	24.77	-0.12
41C PC3	41	10	41055	2636.5	41055	2636.5	QPSK	1	24	41	20	40911	2622.1	24.42	24.32	-0.10
41C PC2	41	5	41055	2636.5	41055	2636.5	QPSK	1	0	41	20	40938	2624.8	26.62	26.62	0.00
12A-46A	12	5	23155	713.5	5155	743.5	QPSK	1	12	16	20	50665	5537.5	24.87	24.81	-0.06

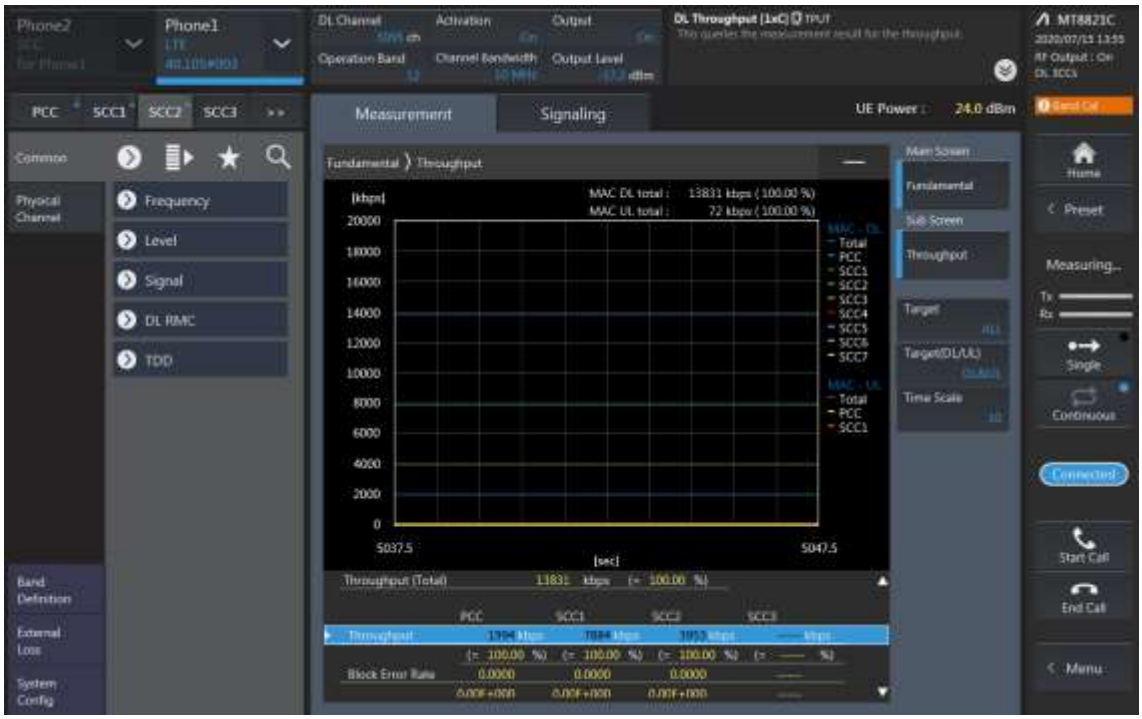
LTE Down Link 3CA Call Setup

PCC Setting: Channel /RB/BW/Modulation

SCC1 Setting : Channel /RB/BW/Modulation



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

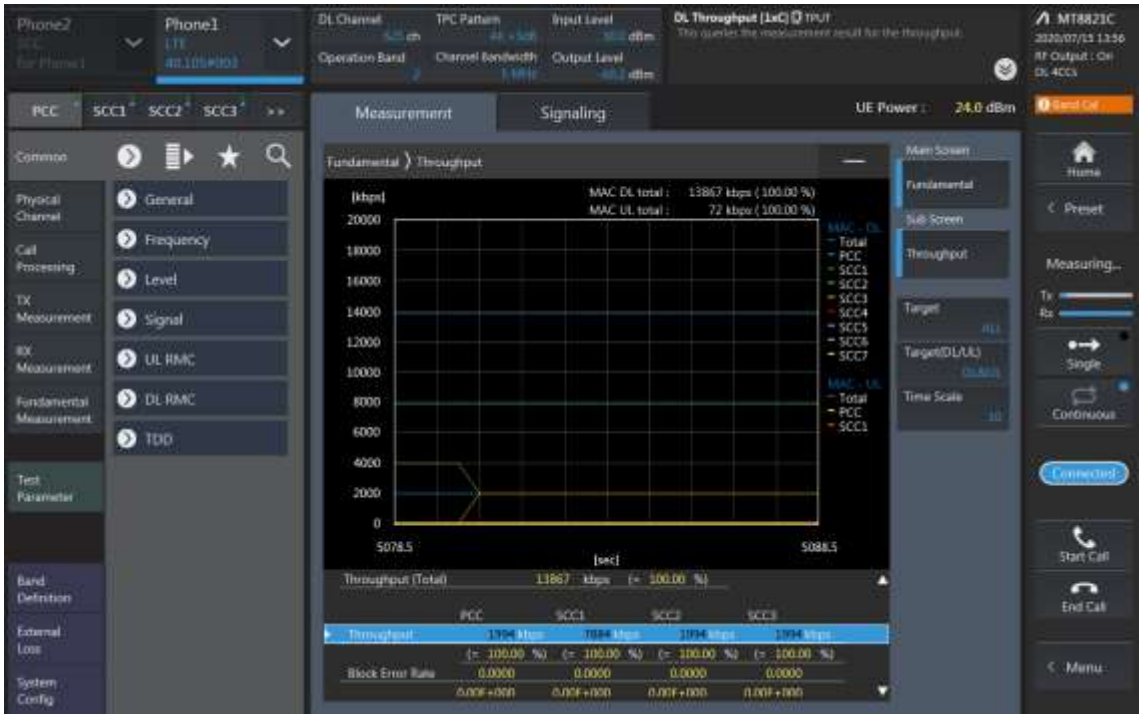


3CA Downlink Carrier aggregation conducted Powers

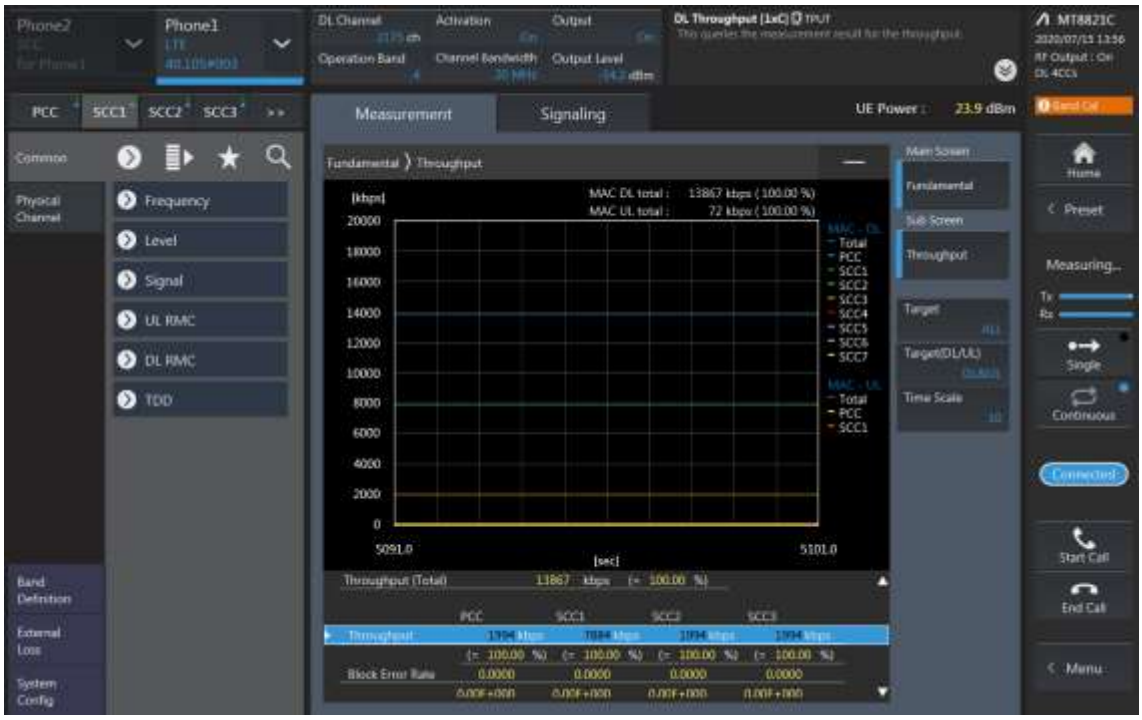
Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-4A-13A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	13	10	5230	751	24.54	24.48	-0.06
2A-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.2	24.19	-0.01
2A-4A-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	24.44	24.36	-0.08
2A-4A-71A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.47	-0.07
2A-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	71	20	68761	634.5	24.2	24.16	-0.04
2A-4A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.6	24.63	0.03
4A-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	13	10	5230	751	24.2	24.13	-0.07
4A-4A-13A	13	10	23230	782	5230	751	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	24.44	24.4	-0.04
4A-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	71	20	68761	634.5	24.2	24.11	-0.09
4A-4A-71A	71	5	133442	695	68906	649	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.6	24.62	0.02
41D PC3	41	10	41055	2636.5	41055	2636.5	QPSK	1	24	41	20	40911	2622.1	41	20	40713	2602.3	24.42	24.33	-0.09
41D PC2	41	5	41055	2636.5	41055	2636.5	QPSK	1	0	41	20	40938	2624.8	41	20	40740	2605	26.62	26.53	-0.09
66A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67038	2170.2	66	20	67236	2190	24.29	24.32	0.03
66A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	66	20	67236	2190	24.29	24.27	-0.02
4A-46A-46A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	47090	5180	24.2	24.2	0.00
46A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	46	20	50665	5537.5	24.29	24.28	-0.01

LTE Down Link 4CA Call Setup

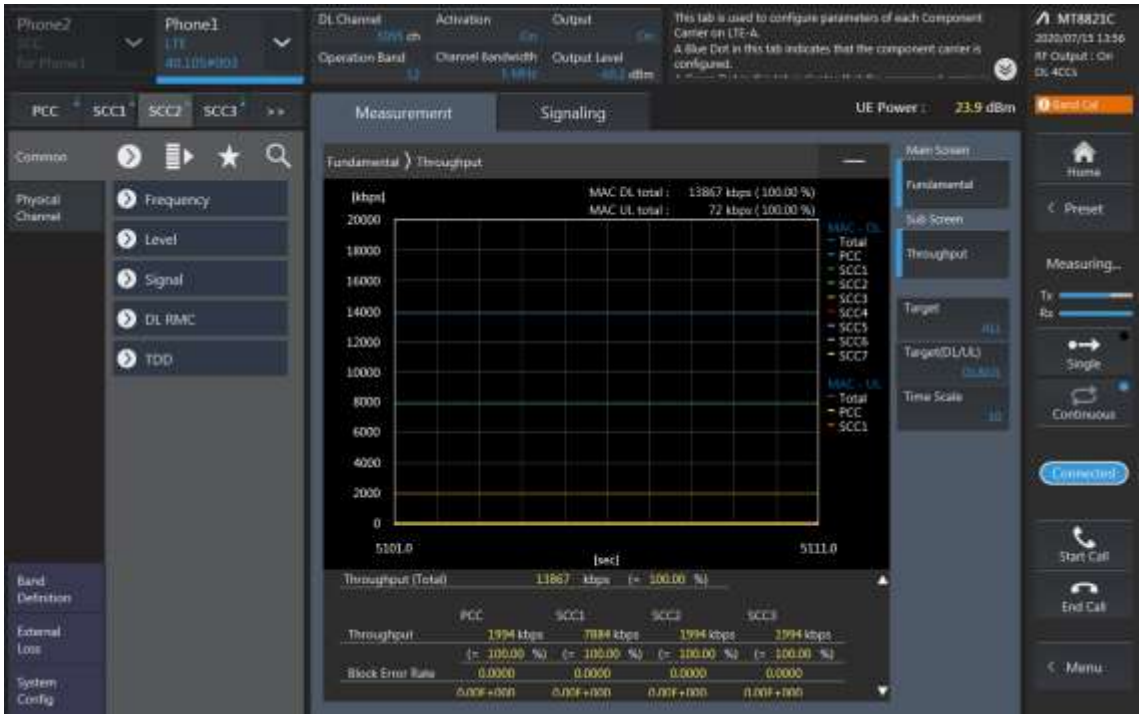
PCC Setting: Channel /RB/BW/Modulation



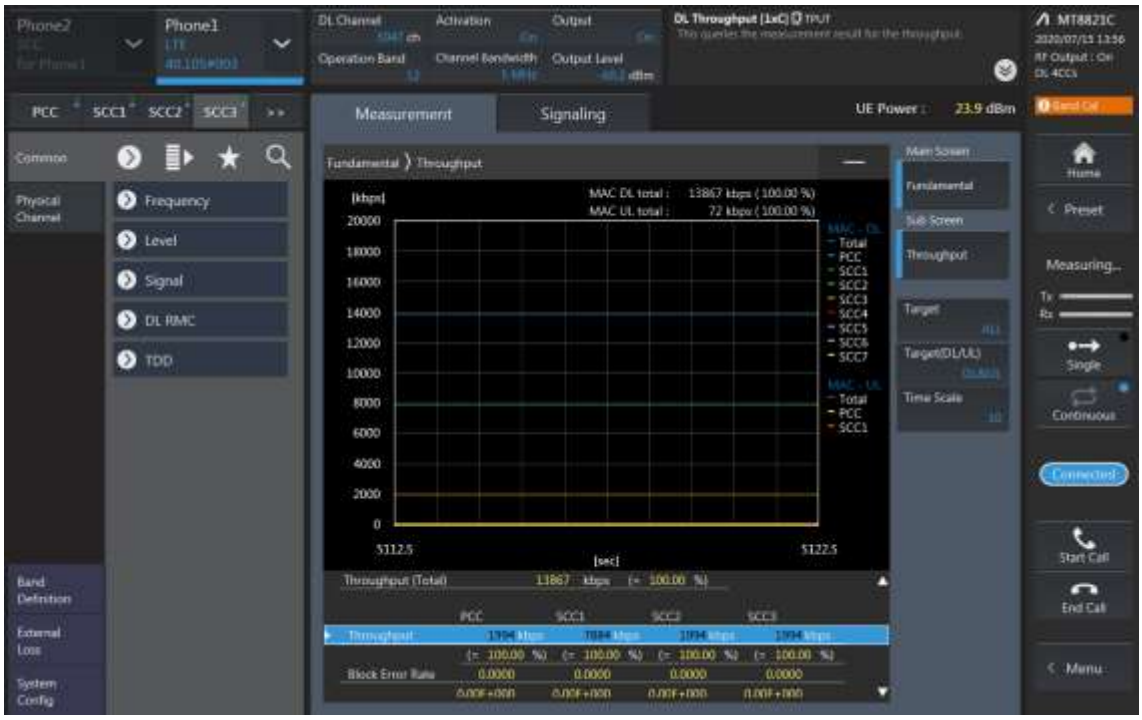
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



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



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



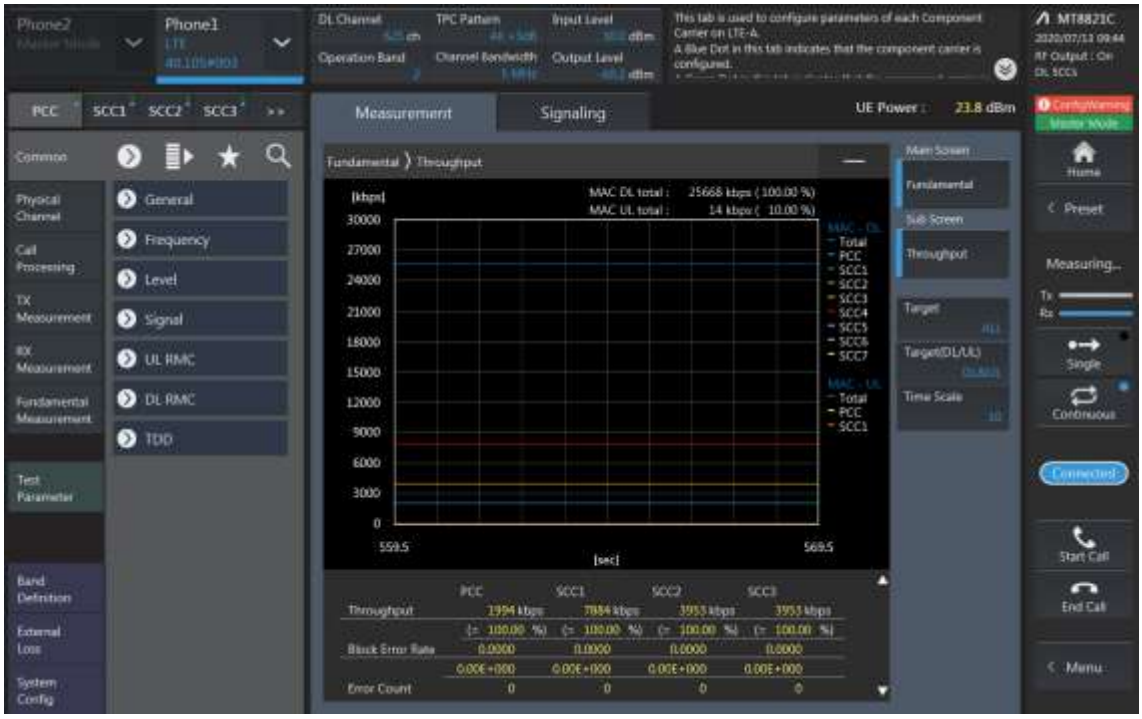
4CA Downlink Carrier aggregation conducted Powers

Combination	PCC									SCC				SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-2A-4A-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.48	-0.06
2A-2A-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.1	-0.1
2A-2A-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.54	24.54	0.00
2A-2A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.16	-0.04
2A-2A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.28	24.28	0.00
2A-2A-4A-12A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.54	24.57	0.03
2A-2A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.18	-0.02
2A-2A-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.87	24.73	-0.14
2A-2A-4A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.47	-0.07
2A-2A-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.2	24.16	-0.04
2A-2A-4A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.6	24.62	0.02
2A-2A-5B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	5	5	2453	874.3	24.54	24.49	-0.05
2A-2A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	2	20	1100	1980	24.28	24.17	-0.11
2A-2A-12A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.54	24.44	-0.1
2A-2A-12A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.77	-0.1
2A-2A-12A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.18	-0.11
2A-2A-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.54	24.49	-0.05
2A-2A-66A-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.23	-0.06
2A-2A-66A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.6	24.51	-0.09
2C-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1044	1974.4	66	20	66786	2145	66	20	67236	2190	24.54	24.53	-0.01
2C-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.29	24.27	-0.02
2A-4A-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.54	24.45	-0.09
2A-4A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.2	24.16	-0.04
2A-4A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.28	24.16	-0.12
2A-4A-4A-12A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.54	24.47	-0.07
2A-4A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.2	24.17	-0.03
2A-4A-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.87	24.86	-0.01
2A-4A-5B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	5	10	2525	881.5	5	5	2453	874.3	24.54	24.43	-0.11
2A-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.2	24.12	-0.08
2A-4A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	4	20	2175	2132.5	24.28	24.24	-0.04
2A-4A-12B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.54	24.57	0.03
2A-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.2	24.08	-0.12
2A-4A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	4	20	2175	2132.5	24.87	24.86	-0.01
2A-7A-7A-13A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	13	10	5230	751	24.54	24.52	-0.02
2A-7A-7A-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	13	10	5230	751	22.4	22.34	-0.06
2A-7A-7A-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.44	24.46	0.02
2A-7A-7A-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.42	-0.12
2A-7A-7A-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.37	-0.03
2A-7A-7A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.23	-0.06
2A-7C-13A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	13	10	5230	751	24.54	24.47	-0.07
2A-7C-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	13	10	5230	751	22.4	22.4	0.00
2A-7C-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.44	24.32	-0.12
2A-7C-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	66	20	66786	2145	24.54	24.4	-0.14
2A-7C-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	66	20	66786	2145	22.4	22.29	-0.11
2A-7C-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.29	24.24	-0.05
2A-12A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.54	22.5	-0.04
2A-12A-66A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.76	-0.11
2A-12A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.29	24.19	-0.1
2A-12A-66C	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	22.54	22.52	-0.02
2A-12A-66C	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.87	24.78	-0.09

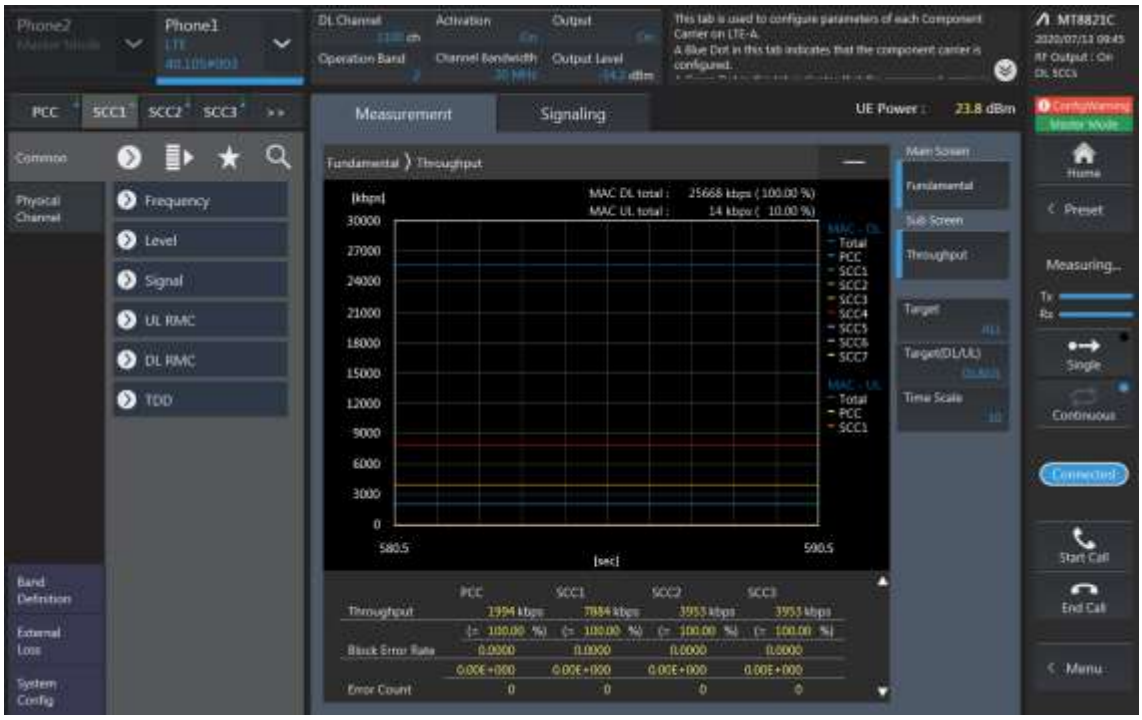
Combination	PCC									SCC				SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-12A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	12	10	5095	737.5	24.29	24.18	-0.11
2A-13A-66C	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	22.54	22.46	-0.08
2A-13A-66C	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.44	24.36	-0.08
2A-13A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	13	10	5230	751	24.29	24.2	-0.09
2A-66A-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	22.54	22.52	-0.02
2A-66A-66A-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	71	20	68761	634.5	24.29	24.2	-0.09
2A-66A-66A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.6	24.63	0.03
2A-66C-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68761	634.5	22.54	22.54	0.00
2A-66C-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	71	20	68761	634.5	24.29	24.22	-0.07
2A-66C-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.6	24.56	-0.04
4A-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	24.2	24.13	-0.07
4A-4A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	4	20	2175	2132.5	4	10	2350	2150	24.28	24.24	-0.04
4A-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	24.2	24.05	-0.15
4A-4A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	4	20	2175	2132.5	4	10	2350	2150	24.87	24.84	-0.03
5A-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2450	874	66	20	66786	2145	66	20	67236	2190	24.28	24.31	0.03
5A-5A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	5	10	2525	881.5	5	5	2625	891.5	24.29	24.25	-0.04
5A-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2450	874	66	15	66786	2145	66	5	66879	2154.3	24.28	24.2	-0.08
5A-5A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	5	10	2525	881.5	5	5	2625	891.5	24.29	24.2	-0.09
5A-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2450	874	66	20	66786	2145	66	20	66984	2164.8	24.28	24.23	-0.05
5A-5A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	5	10	2525	881.5	5	5	2625	891.5	24.29	24.22	-0.07
2A-46A-46A-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	47090	5180	66	20	66786	2145	22.54	22.44	-0.1
2A-46A-46A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	46	20	50665	5537.5	46	20	47090	5180	24.29	24.23	-0.06
4A-46A-46C	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.2	24.2	0.00
4A-46D	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.2	24.08	-0.12
12A-46D	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	46	20	50467	5517.7	46	20	50863	5557.3	24.87	24.74	-0.13

LTE Down Link 5CA Call Setup

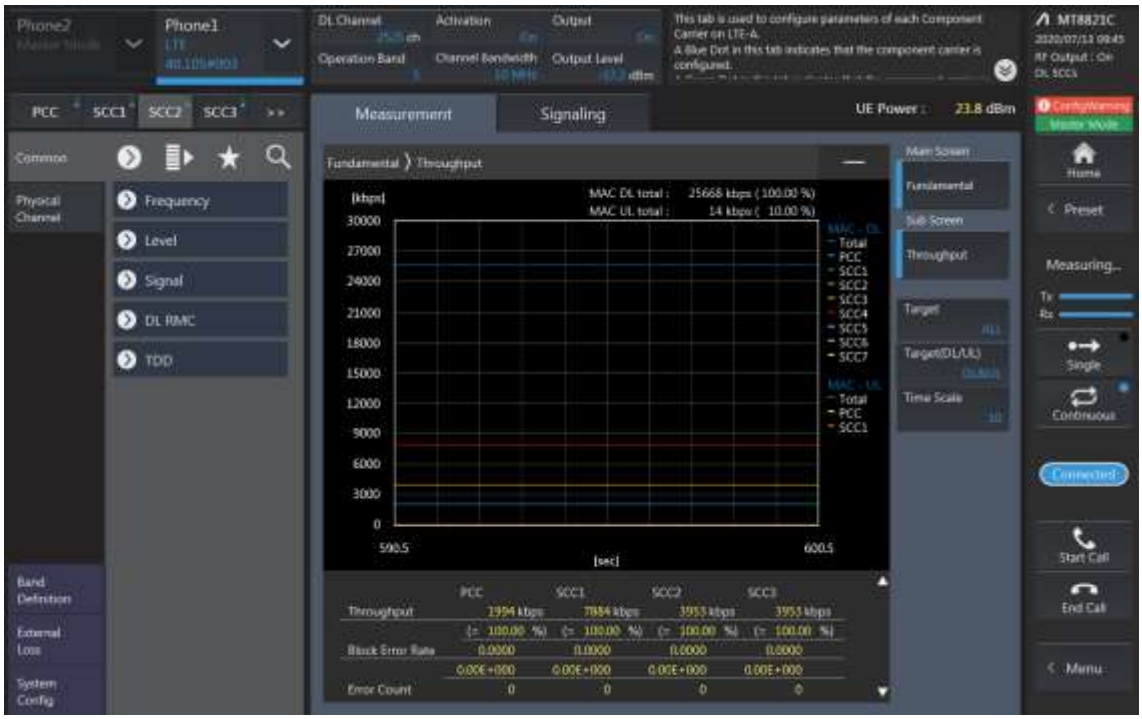
PCC Setting: Channel /RB/BW/Modulation



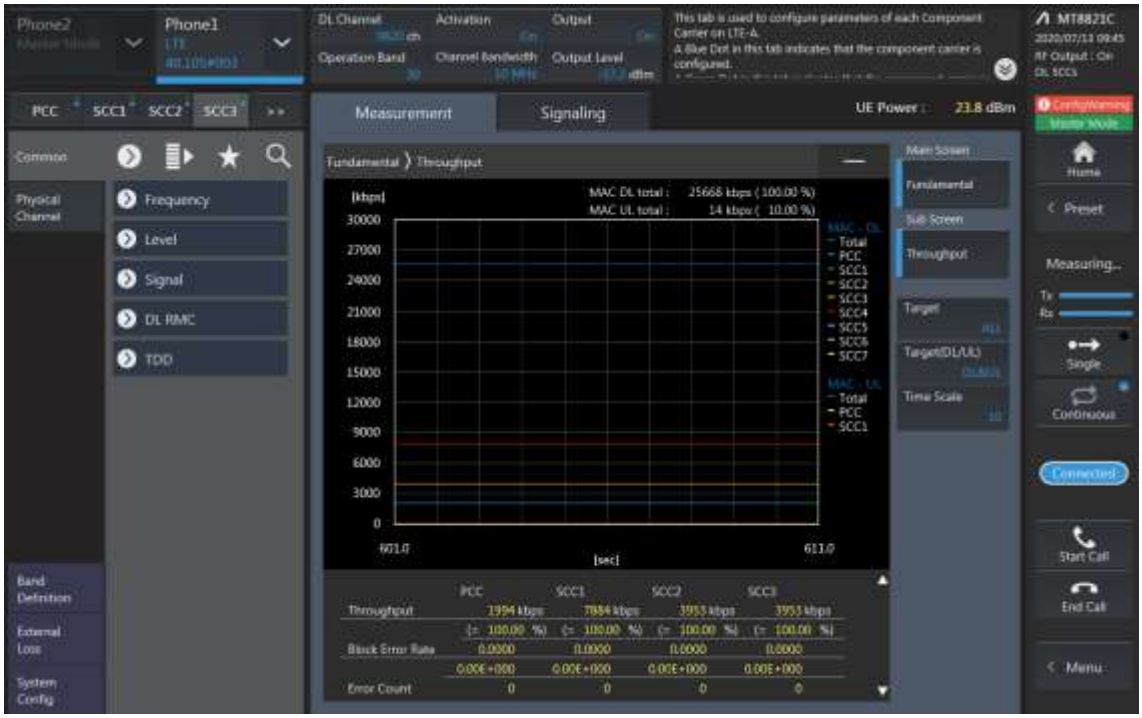
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



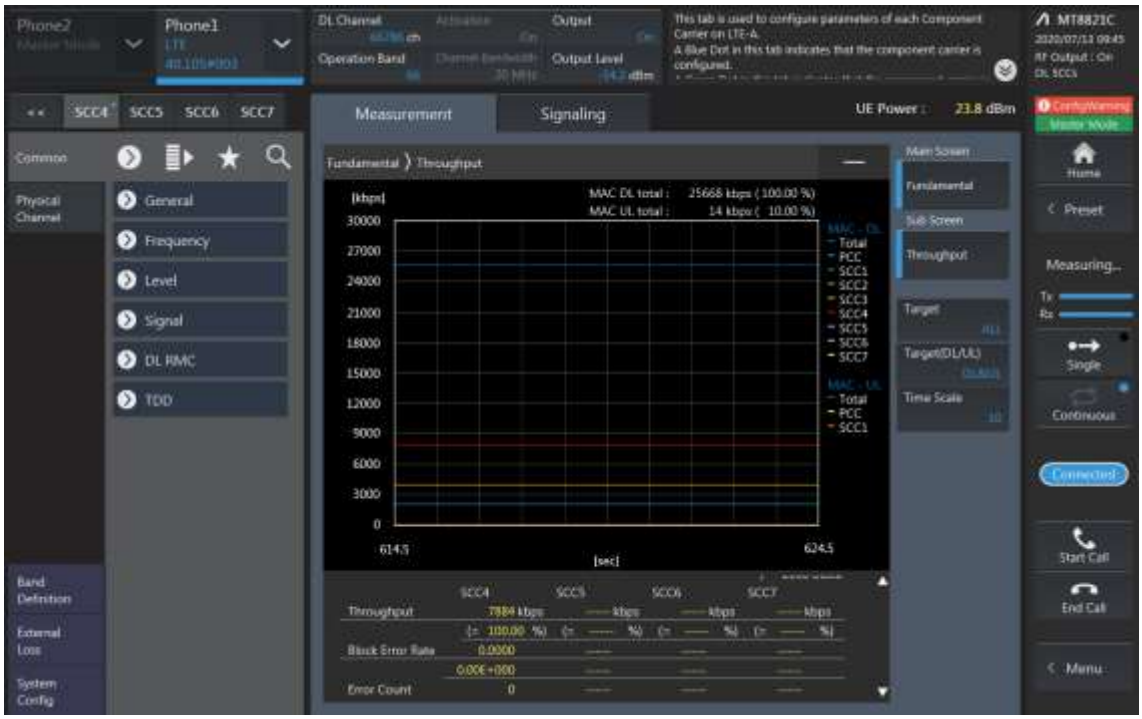
SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



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



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



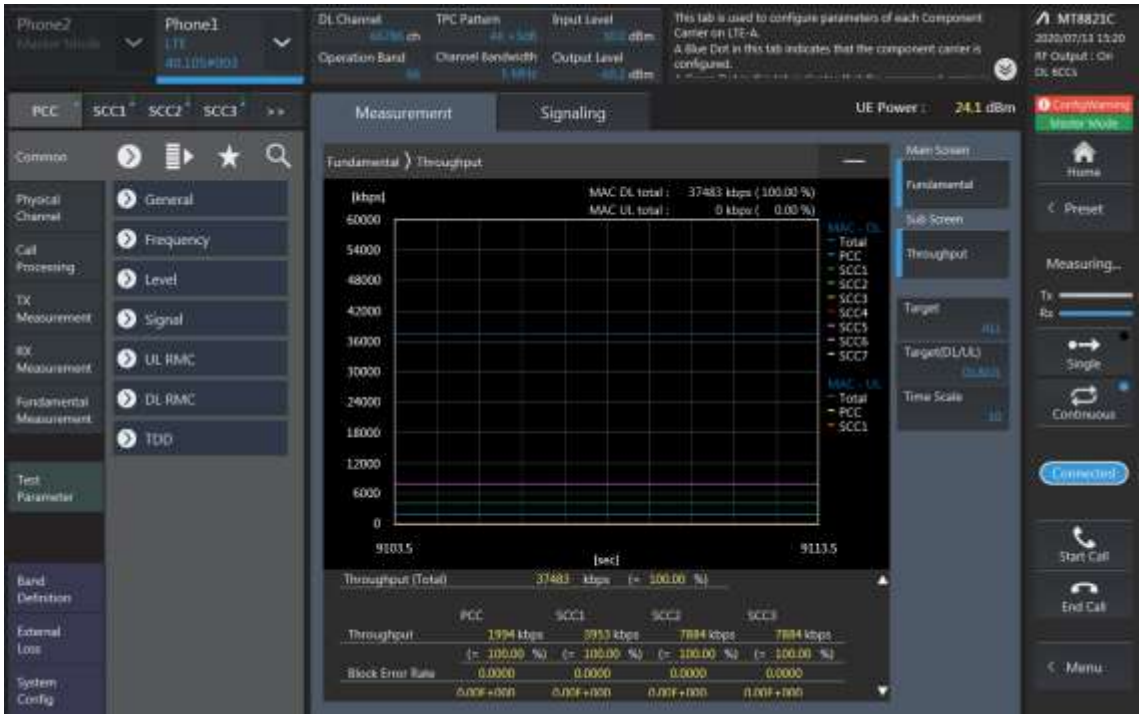
5CA Downlink Carrier aggregation conducted Powers

Combination	PCC									SCC				SCC				SCC				SCC				Tx Power		
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	Delta (2)-(1)
2A-2A-5A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.55	0.01
2A-2A-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.19	-0.09
2A-2A-5A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.23	-0.06
2A-2A-5A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.54	24.51	-0.03
2A-2A-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.28	24.24	-0.04
2A-2A-5A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.28	-0.01
2A-2A-5A-66C	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.54	24.39	-0.15
2A-2A-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.28	24.25	-0.03
2A-2A-5A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.22	-0.07
2A-2A-12B-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.54	24.52	-0.02
2A-2A-12B-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.75	-0.12
2A-2A-12B-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.29	24.24	-0.05
2A-2A-13A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.46	-0.08
2A-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.42	-0.02
2A-2A-13A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.3	0.01
2A-2A-13A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.54	24.42	-0.12
2A-2A-13A-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.44	24.43	-0.01
2A-2A-13A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.18	-0.11
2A-5B-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.54	24.43	-0.11
2A-5B-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.28	24.2	-0.08
2A-5B-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.29	0.00
2A-5B-66B	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	15	66786	2145	66	5	66879	2154.3	24.54	24.5	-0.04
2A-5B-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	15	66786	2145	66	5	66879	2154.3	24.28	24.17	-0.11
2A-5B-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.28	-0.01
2A-5B-66C	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2164.8	24.54	24.47	-0.07
2A-5B-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.28	24.2	-0.08
2A-5B-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.32	0.03
2A-12B-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.54	24.53	-0.01
2A-12B-66A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.87	0.00
2A-12B-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.29	24.14	-0.15
2A-13A-66A-66B	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	67038	2170.2	66	20	67236	2190	24.54	24.42	-0.12
2A-13A-66A-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	67038	2170.2	66	20	67236	2190	24.44	24.32	-0.12
2A-13A-66A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	13	10	5230	751	66	20	67038	2170.2	66	20	67236	2190	24.29	24.31	0.02
2A-13A-66A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	66	20	67236	2190	24.29	24.29	0.00
2A-2A-46D	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.54	24.55	0.01
2A-5A-46D	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.54	24.46	-0.08
2A-5A-46D	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.28	24.22	-0.06
2A-5A-46C-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.54	24.4	-0.14
2A-5A-46C-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.28	24.23	-0.05
2A-5A-46C-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.29	24.16	-0.13
2A-5A-46A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.54	24.57	0.03
2A-5A-46A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.28	24.23	-0.05
2A-5A-46A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	24.29	24.21	-0.08

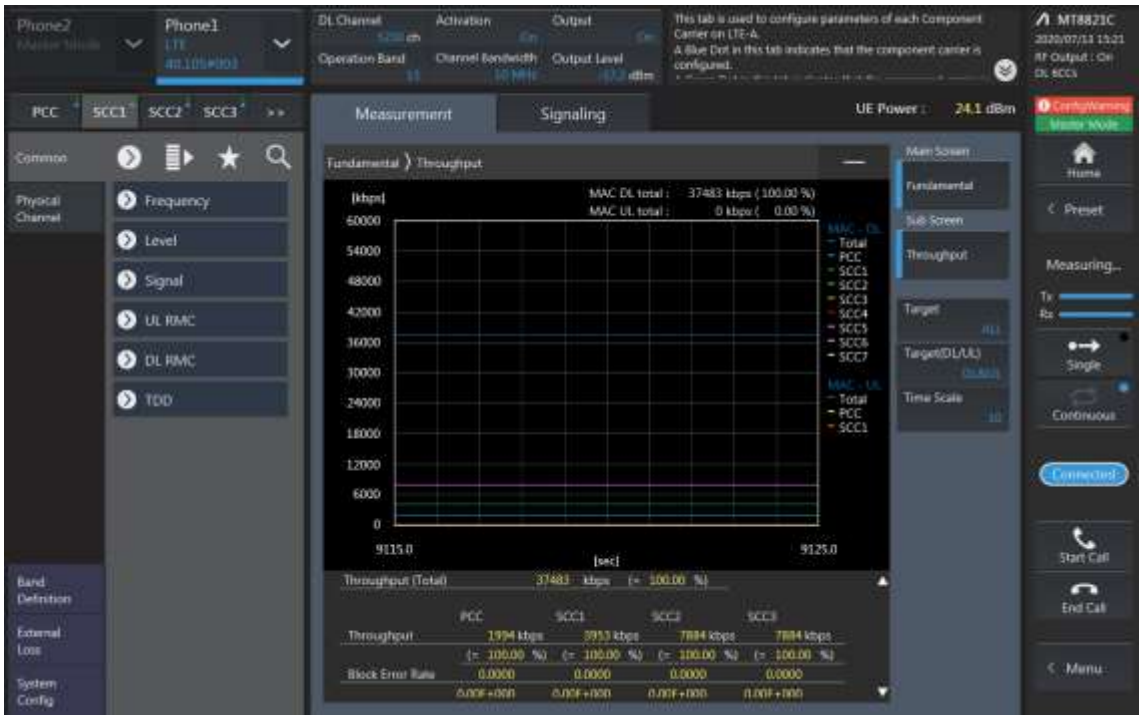
2A-46A-46D	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.2	46	20	53144	5785.4	24.54	24.57	0.03
2A-46A-46C-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	66	20	66786	2145	24.54	24.41	-0.13
2A-46A-46C-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.29	24.25	-0.04
4A-46A-46D	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.2	46	20	53144	5785.4	24.2	24.22	0.02
5B-46D	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.28	24.27	-0.01
46A-46D-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.2	46	20	53144	5785.4	24.29	24.17	-0.12

LTE Down Link 6CA Call Setup

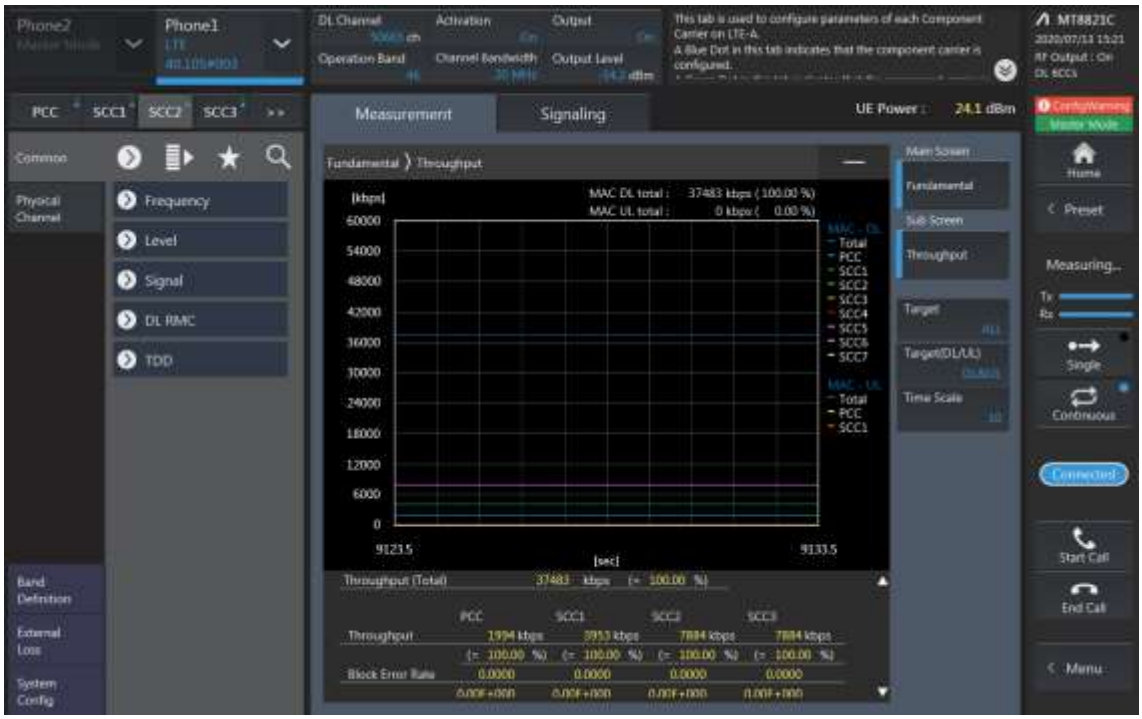
PCC Setting: Channel /RB/BW/Modulation



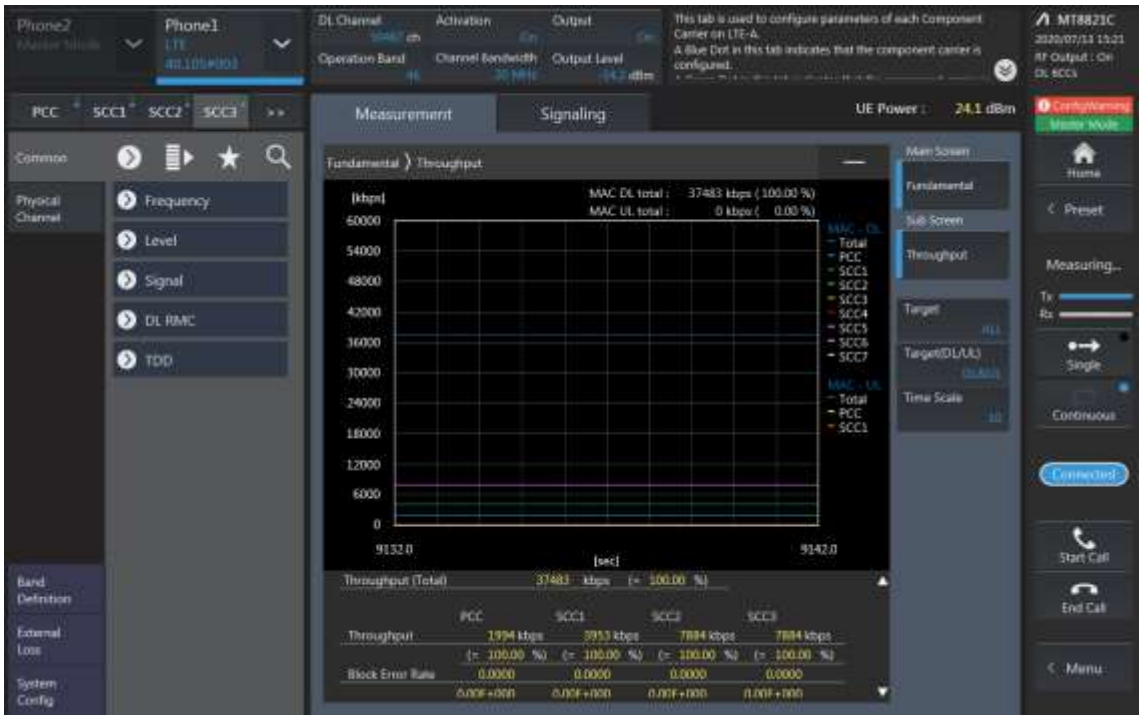
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



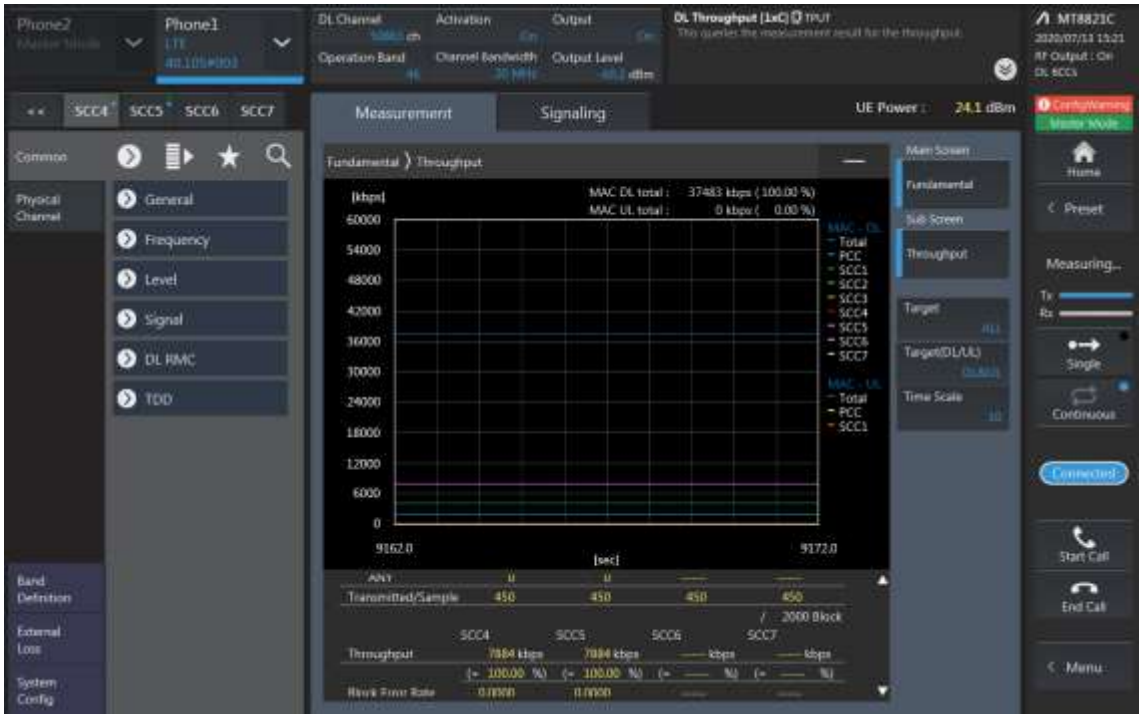
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



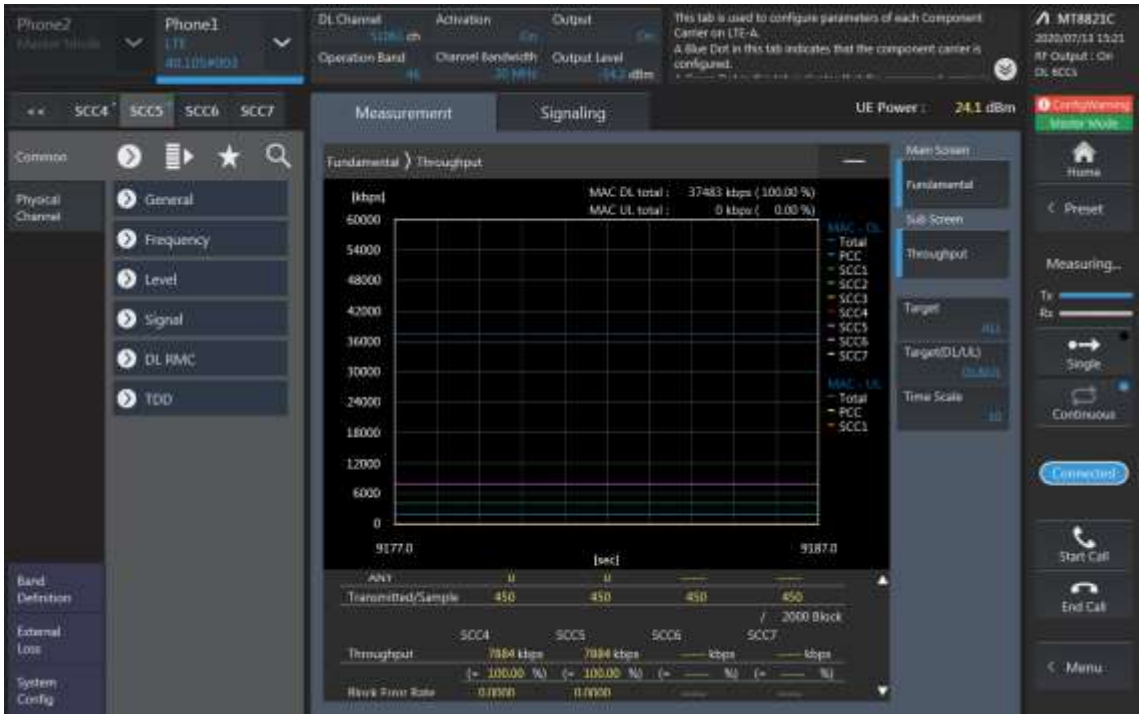
SCC3 Setting (Channel /RB/BW/Modulation)and call Connection



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



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

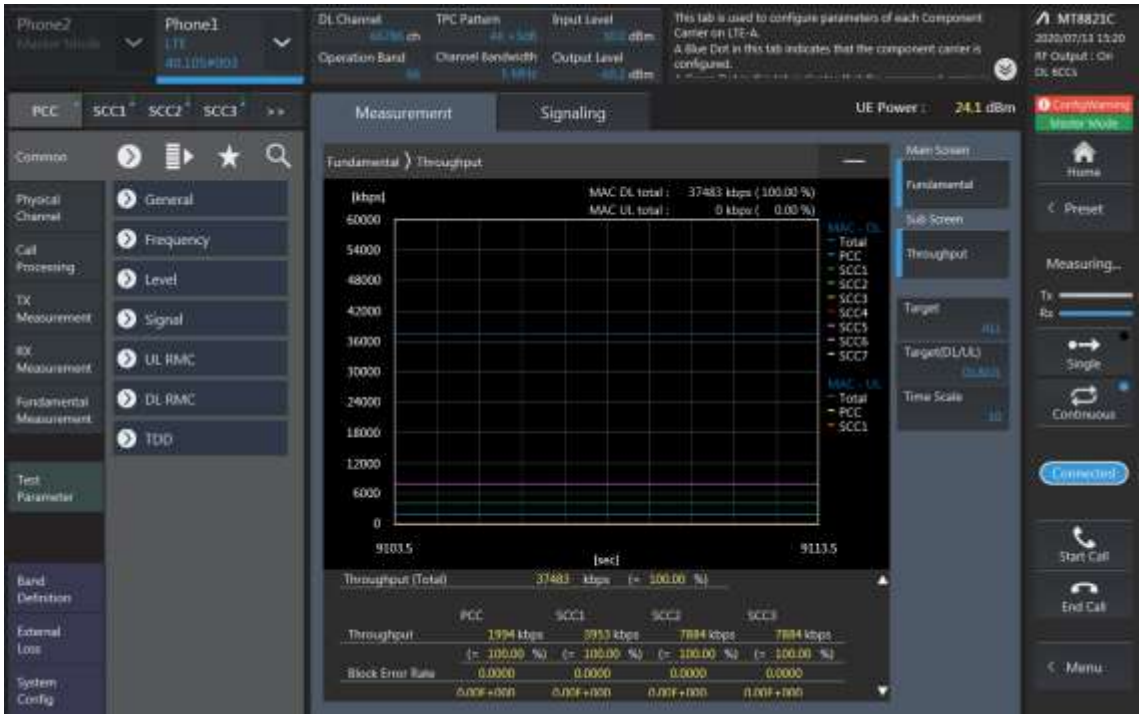


6CA Downlink Carrier aggregation conducted Powers

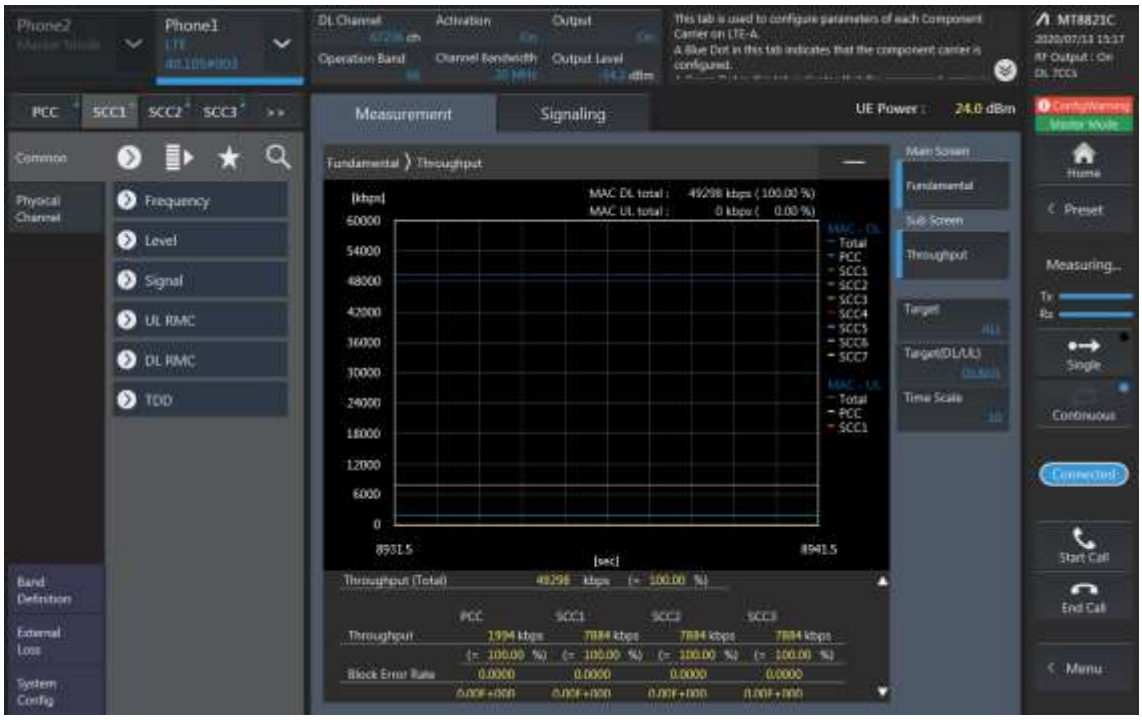
Combination	PCC									SCC				SCC				SCC				SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-13A-46E	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.54	24.55	0.01
2A-13A-46E	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.44	24.46	0.02
13A-46E-66A	13	10	23230	782	5230	751	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.44	24.4	-0.04
13A-46E-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.32	0.03

LTE Down Link 7CA Call Setup

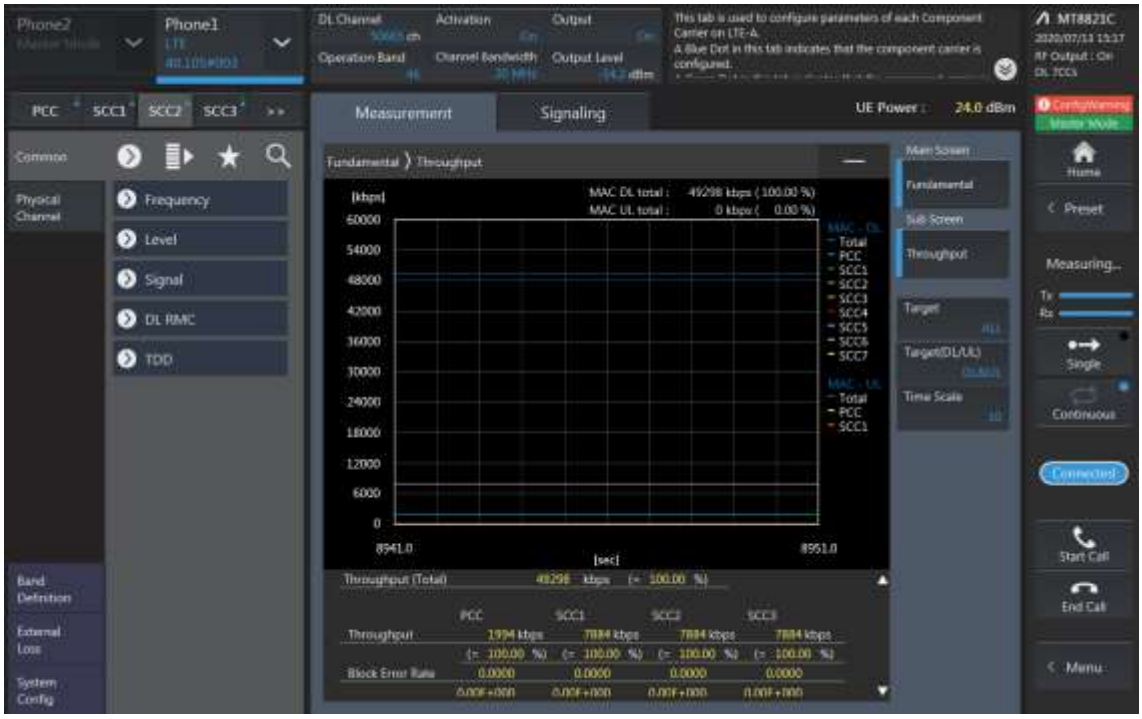
PCC Setting: Channel /RB/BW/Modulation



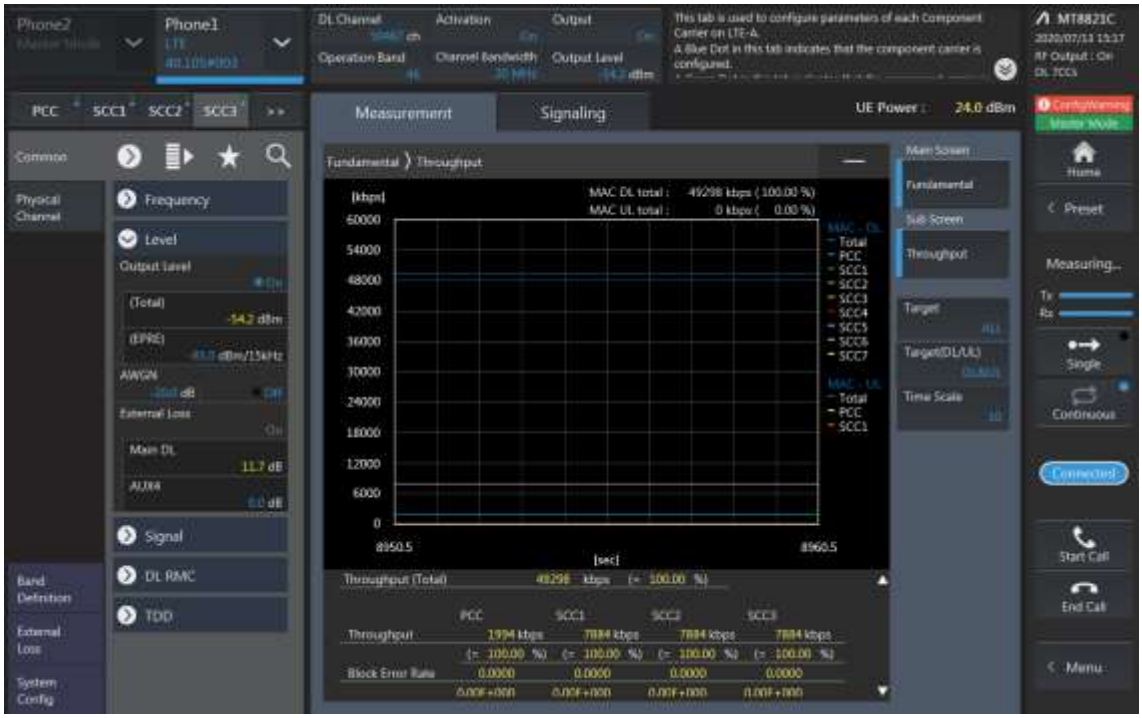
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



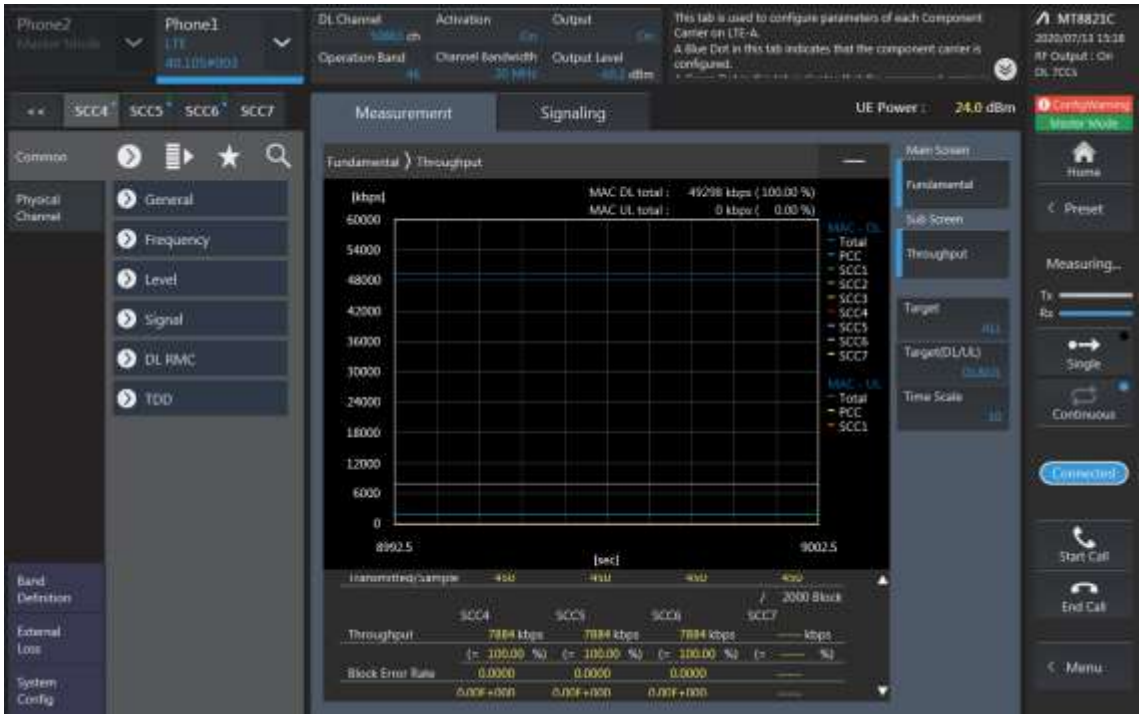
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



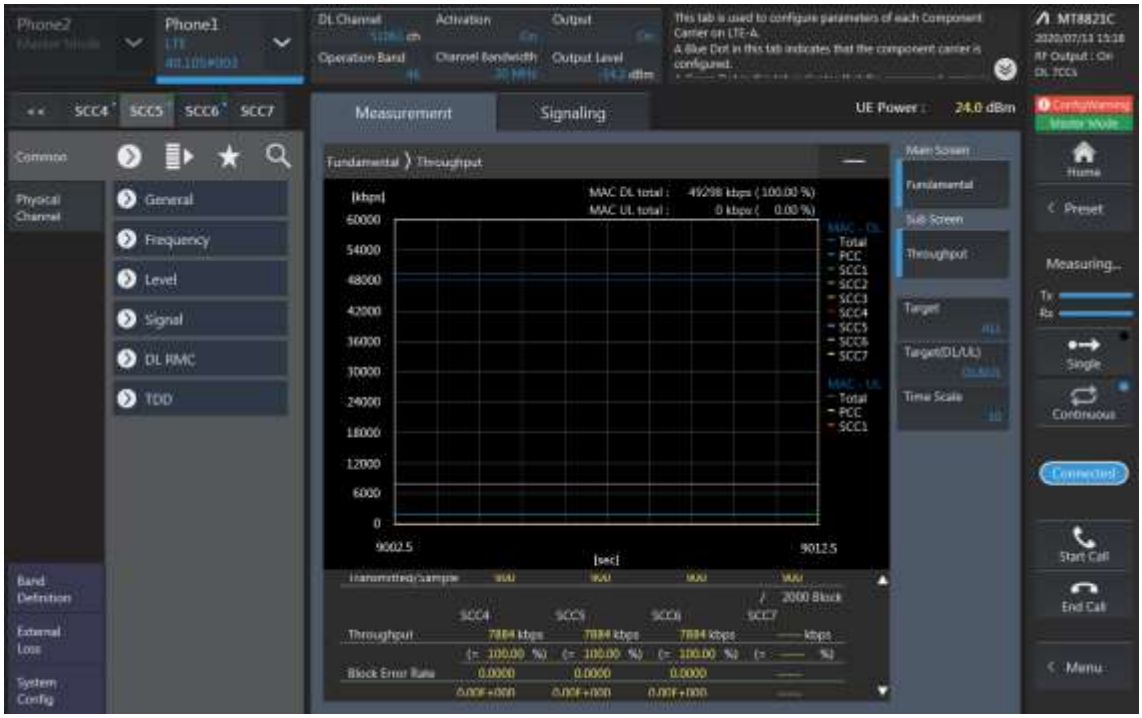
SCC3 Setting (Channel /RB/BW/Modulation)and call Connection



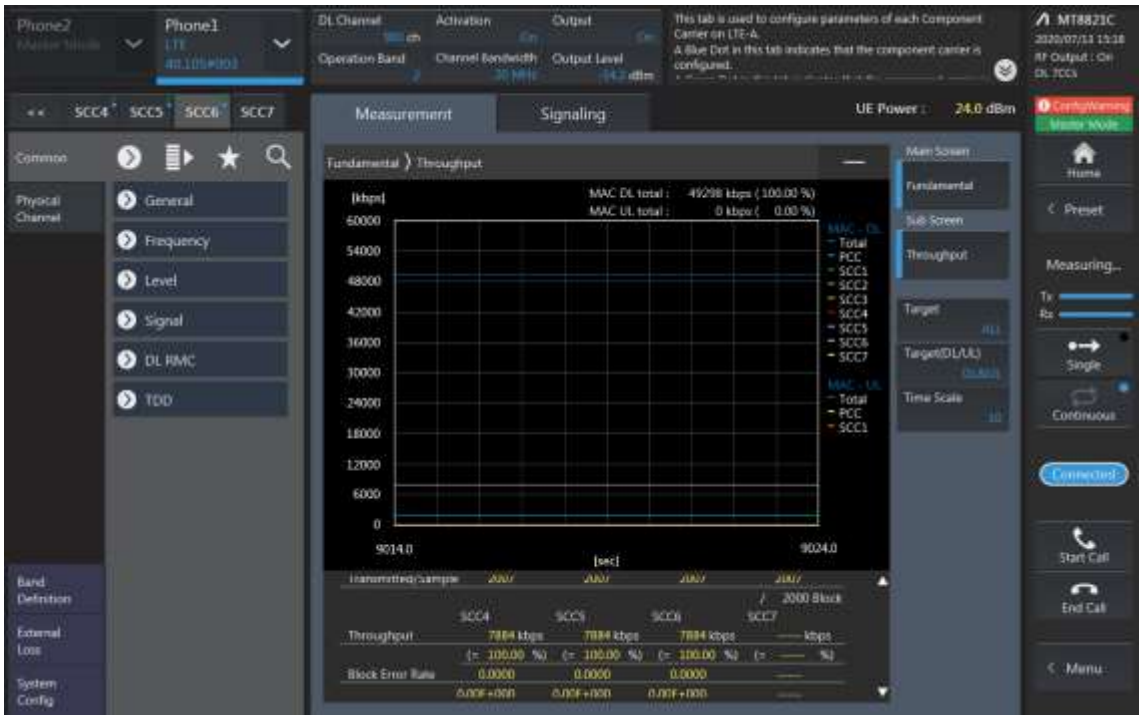
SCC4 Setting (Channel /RB/BW/Modulation)and call Connection



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



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



7CA Downlink Carrier aggregation conducted Powers

Combination	PCC									SCC				SCC				SCC				SCC				SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-5A-46E-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.54	24.55	0.01
2A-5A-46E-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.28	24.32	0.04
2A-5A-46E-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.25	-0.04
2A-5A-46D-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.5	-0.04
2A-5A-46D-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.28	24.28	0.00
2A-5A-46D-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.24	-0.05
2A-13A-46D-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.55	0.01
2A-13A-46D-66A-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.44	24.46	0.02
2A-13A-46D-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.24	-0.05
2A-46E-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.54	24.55	0.01
2A-46E-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.31	0.02
5A-46E-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.28	24.3	0.02
5A-46E-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.2	-0.09

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

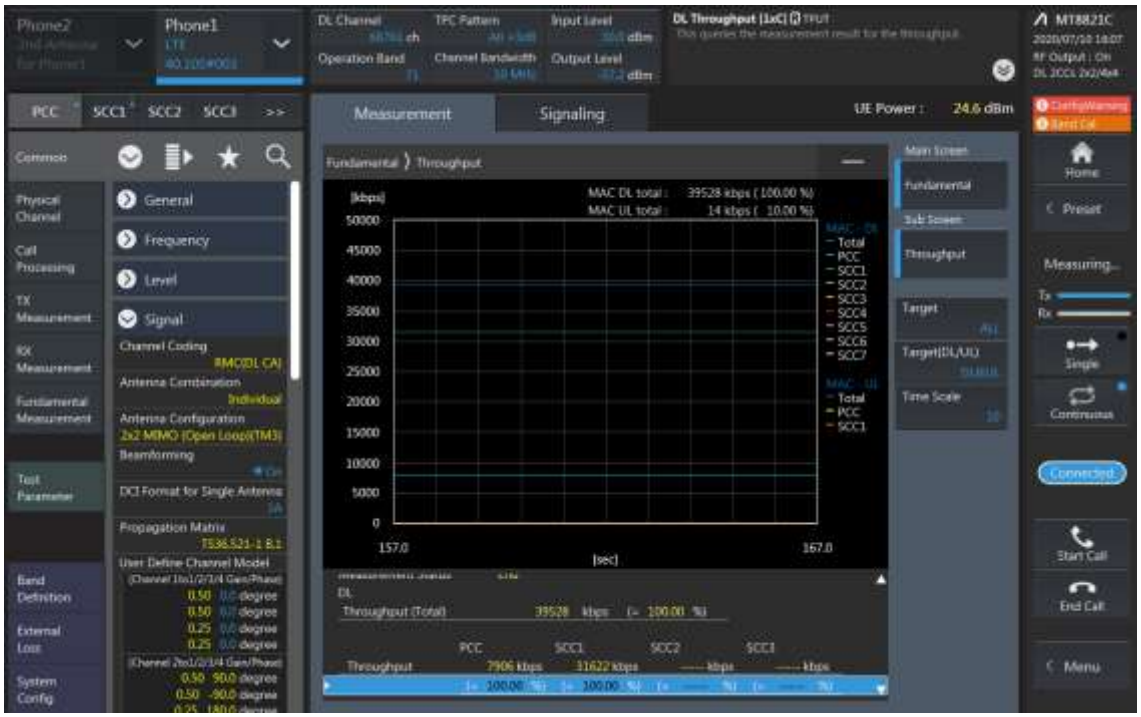
–UL power measurements with and without DL MIMO

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

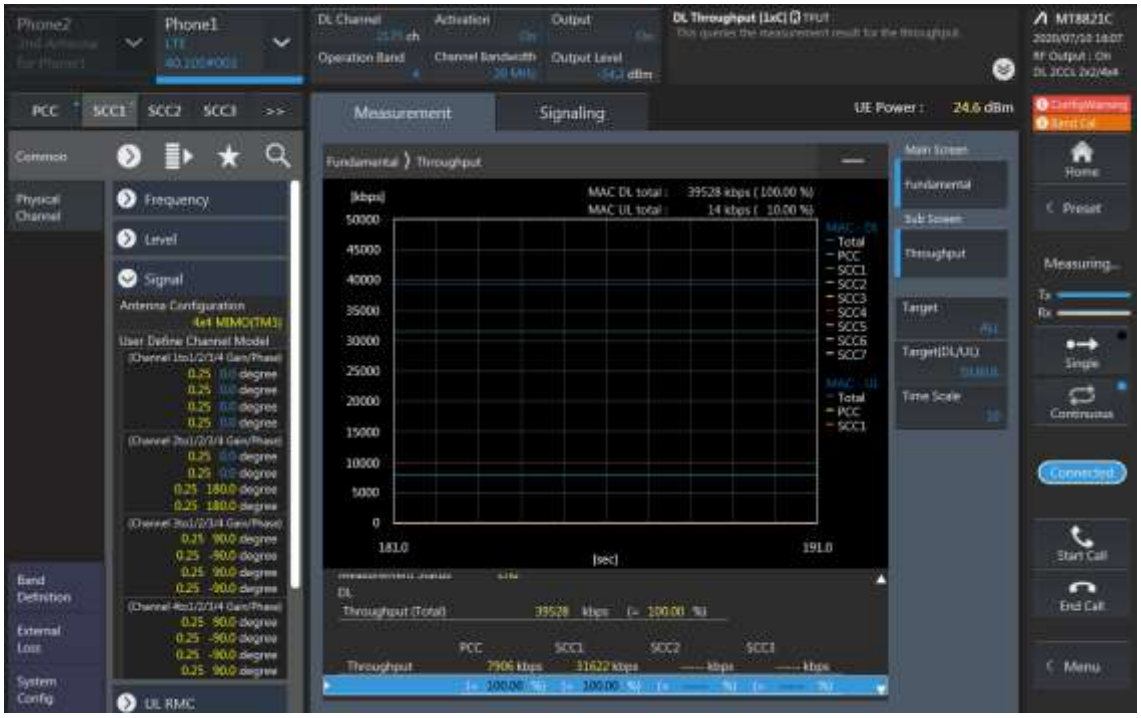
–for DL MIMO with carrier aggregation, the same SAR test exclusion procedure should be considered

LTE Down Link 2CA 4x4 MIMO Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



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

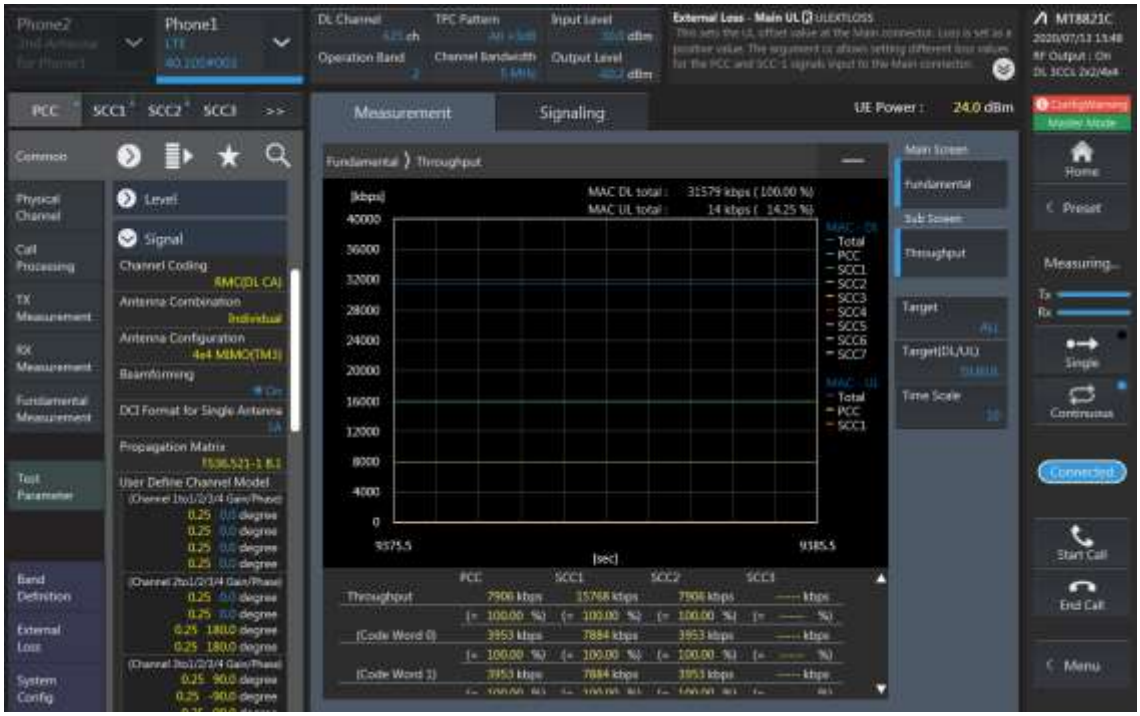


LTE Downlink 2CA 4X4 MIMO Maximum Conducted Power

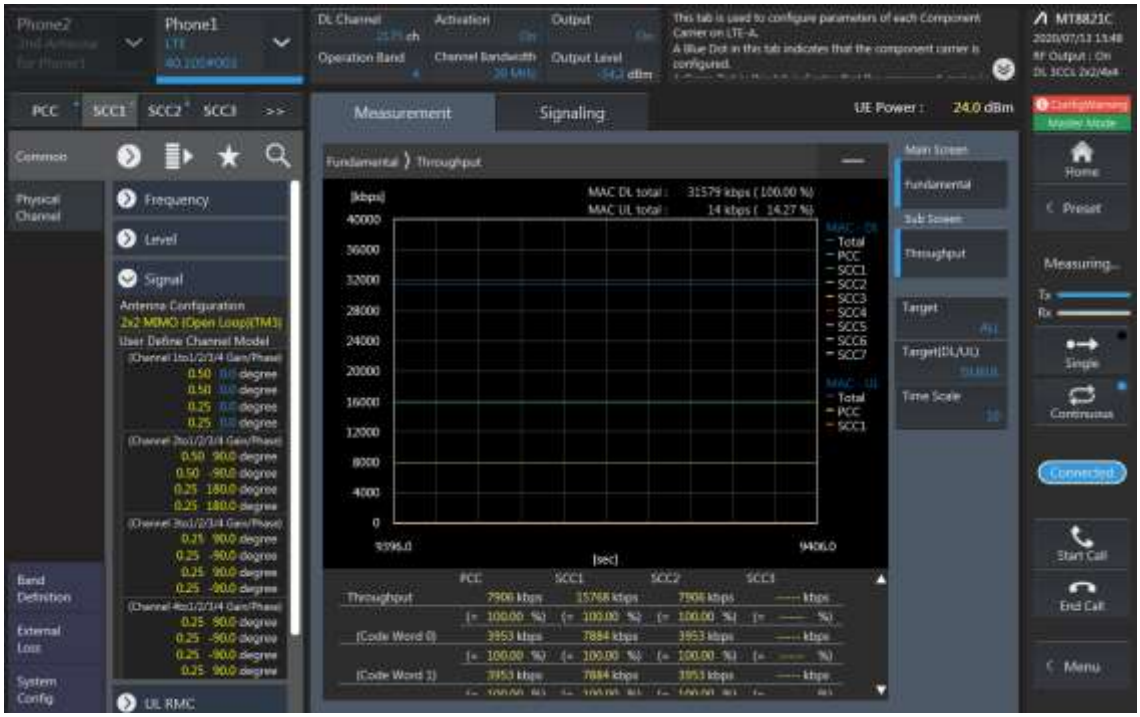
Combination	PCC									SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
25A-[25A](0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8640	1990	24.56	24.5	-0.06
[25A]-25A(0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8640	1990	24.56	24.6	0.04
[25A]-[25A](0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8640	1990	24.56	24.57	0.01
25A-[25A](1)	25	15	26365	1882.5	8365	1962.5	QPSK	1	36	25	20	8590	1985	24.89	24.79	-0.1
[25A]-25A(1)	25	15	26365	1882.5	8365	1962.5	QPSK	1	36	25	20	8590	1985	24.89	24.9	0.01
[25A]-[25A](1)	25	15	26365	1882.5	8365	1962.5	QPSK	1	36	25	20	8590	1985	24.89	24.9	0.01
[41C] PC3	41	10	41055	2636.5	41055	2636.5	QPSK	1	24	41	20	40911	2622.1	24.42	24.33	-0.09
[41C] PC2	41	5	41055	2636.5	41055	2636.5	QPSK	1	0	41	20	40938	2624.8	26.62	26.6	-0.02

LTE Down Link 3CA 4x4 MIMO Call Setup

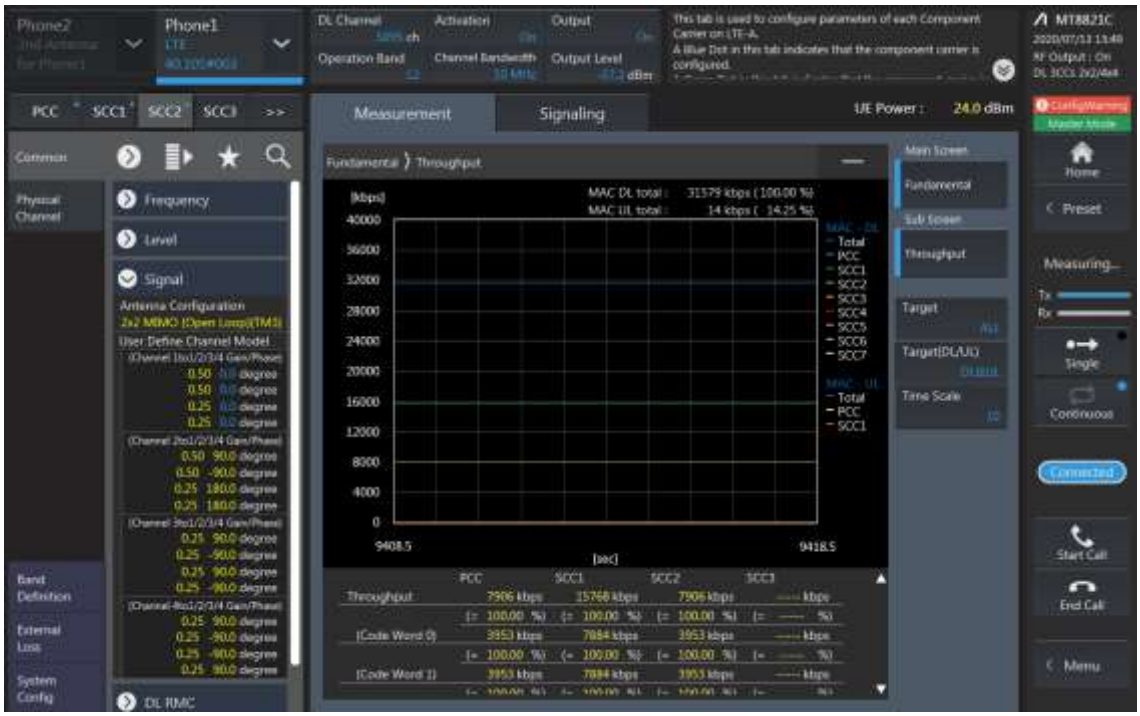
PCC Setting: Channel /RB/BW/Modulation



SCC1 Setting : Channel /RB/BW/Modulation



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

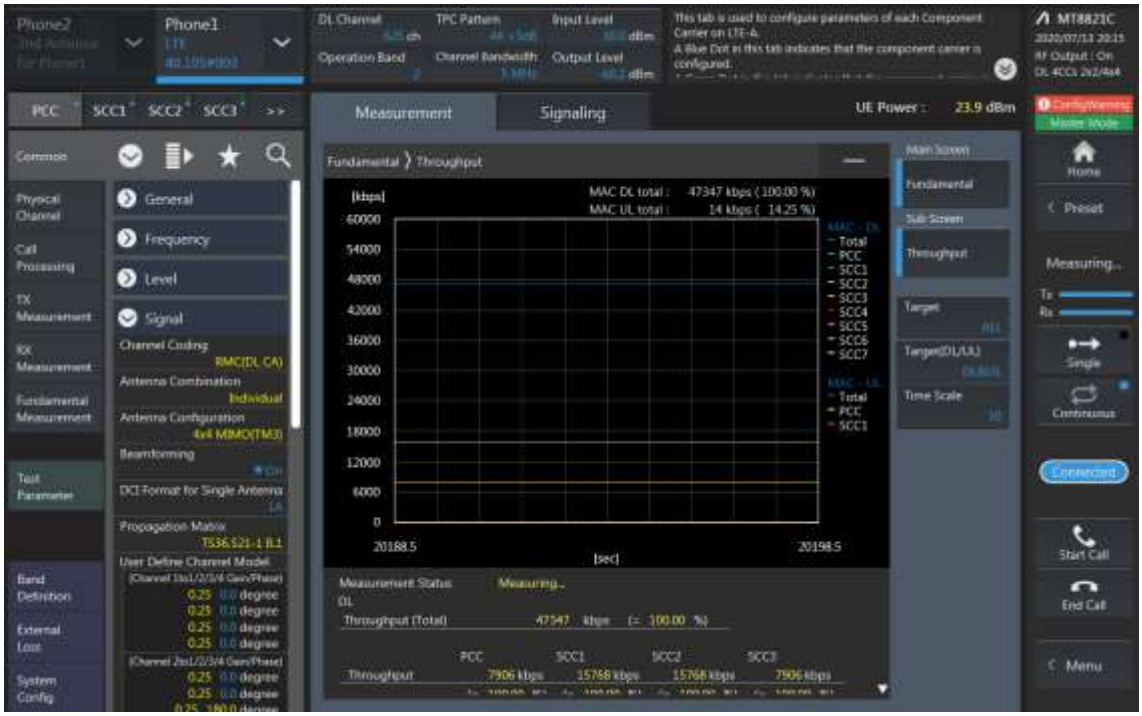


LTE Downlink 3CA 4X4 MIMO Maximum Conducted Power

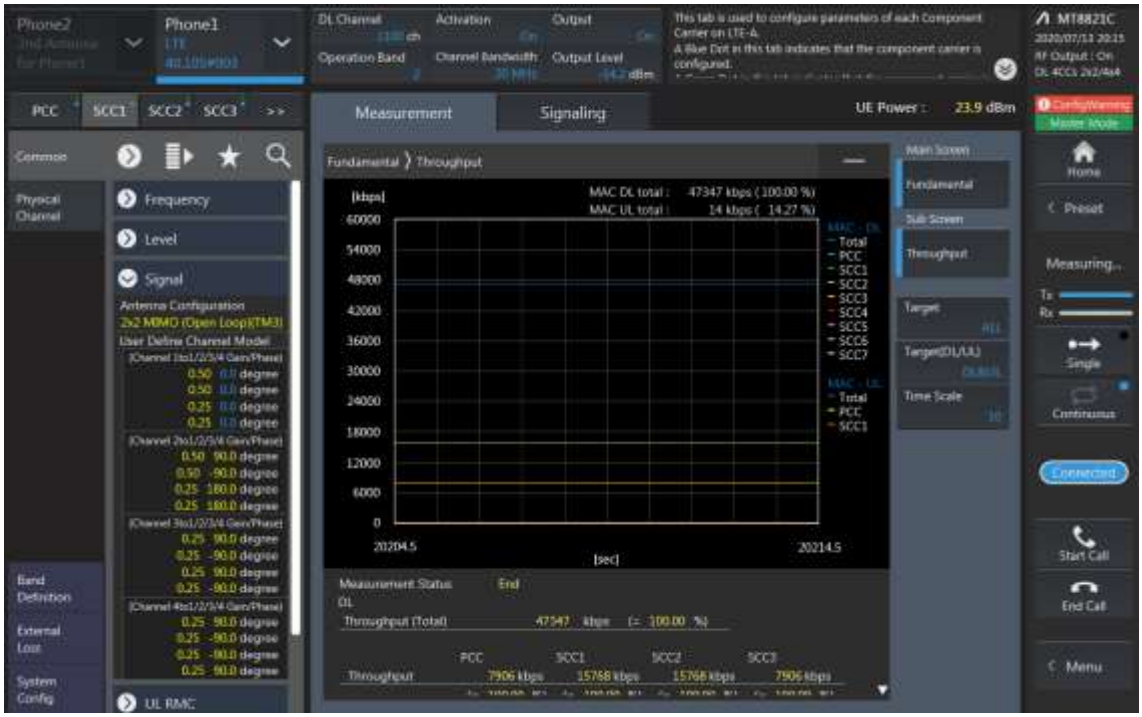
Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-[4A]-13A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	13	10	5230	751	24.54	24.5	-0.04
[2A]-4A-13A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	13	10	5230	751	24.54	24.52	-0.02
[2A]-[4A]-13A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	13	10	5230	751	24.54	24.56	0.02
2A-[4A]-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.2	24.13	-0.07
[2A]-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.2	24.1	-0.1
[2A]-[4A]-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.2	24.24	0.04
2A-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	24.44	24.37	-0.07
[2A]-4A-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	24.44	24.44	0.00
[2A]-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	24.44	24.46	0.02
2A-[4A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.58	0.04
[2A]-4A-71A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.51	-0.03
[2A]-[4A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.51	-0.03
2A-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	71	20	68761	634.5	24.2	24.24	0.04
[2A]-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	71	20	68761	634.5	24.2	24.11	-0.09
[2A]-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	71	20	68761	634.5	24.2	24.22	0.02
2A-[4A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.6	24.57	-0.03
[2A]-4A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.6	24.57	-0.03
[2A]-[4A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.6	24.5	-0.10
4A-[4A]-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	13	10	5230	751	24.2	24.1	-0.10
[4A]-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	13	10	5230	751	24.2	24.22	0.02
[4A]-[4A]-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	13	10	5230	751	24.2	24.19	-0.01
4A-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	24.44	24.39	-0.05
[4A]-4A-13A	13	10	23230	782	5230	751	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	24.44	24.38	-0.06
[4A]-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	24.44	24.42	-0.02
4A-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	71	20	68761	634.5	24.2	24.24	0.04
[4A]-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	71	20	68761	634.5	24.2	24.21	0.01
[4A]-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	71	20	68761	634.5	24.2	24.18	-0.02
4A-[4A]-71A	71	5	133442	695	68906	649	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.6	24.65	0.05
[4A]-4A-71A	71	5	133442	695	68906	649	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.6	24.51	-0.09
[4A]-[4A]-71A	71	5	133442	695	68906	649	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.6	24.65	0.05
[41D] PC3	41	10	41055	2636.5	41055	2636.5	QPSK	1	24	41	20	40911	2622.1	41	20	40713	2602.3	24.42	24.45	0.03
[41D] PC2	41	5	41055	2636.5	41055	2636.5	QPSK	1	0	41	20	40938	2624.8	41	20	40740	2605	26.62	26.63	0.01
66A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67038	2170.2	66	20	67236	2190	24.29	24.29	0.00
[66A]-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67038	2170.2	66	20	67236	2190	24.29	24.22	-0.07
[66A]-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67038	2170.2	66	20	67236	2190	24.29	24.28	-0.01
66A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	66	20	67236	2190	24.29	24.22	-0.07
[66A]-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	66	20	67236	2190	24.29	24.33	0.04
[66A]-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	66	20	67236	2190	24.29	24.26	-0.03
[4A]-46A-46A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	47090	5180	24.2	24.16	-0.04
46A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	46	20	50665	5537.5	24.29	24.3	0.01

LTE Down Link 4CA 4x4 MIMO Call Setup

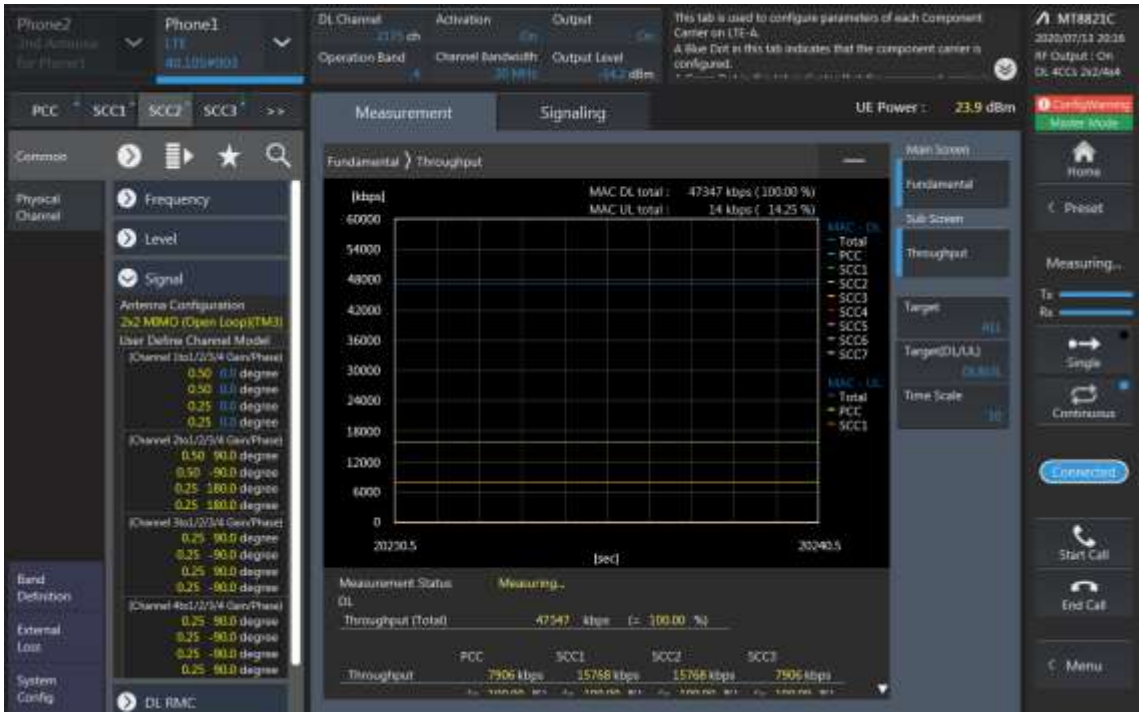
PCC Setting: Channel /RB/BW/Modulation



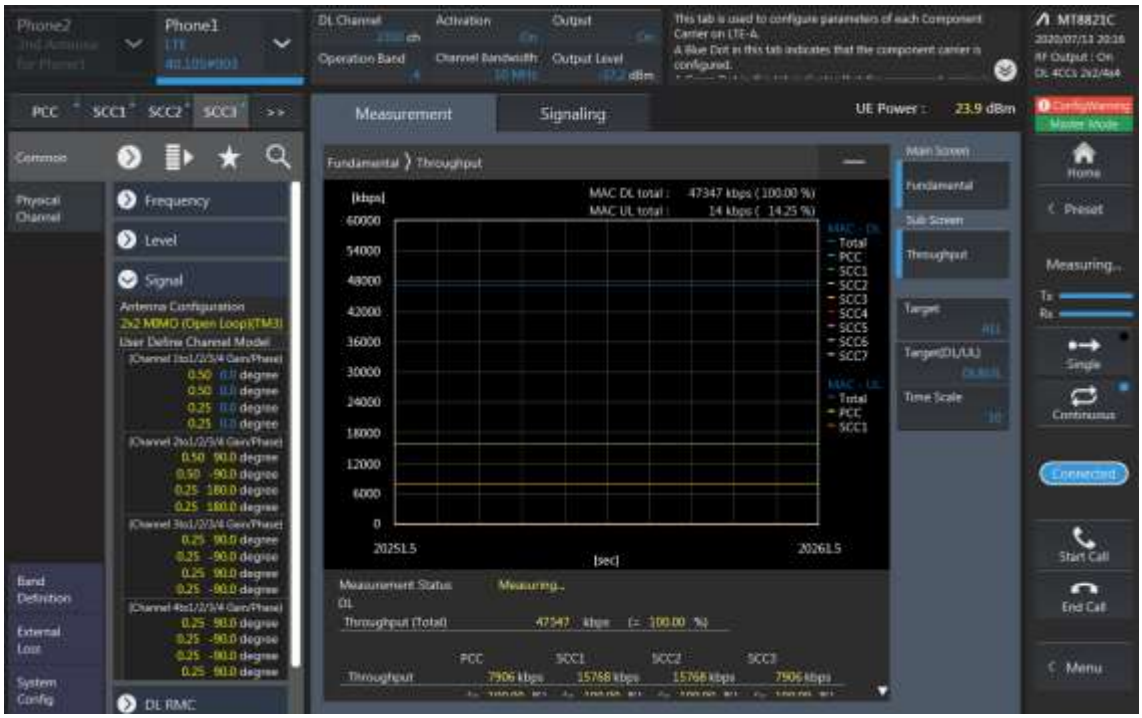
SCC1 Setting : Channel /RB/BW/Modulation



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



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



LTE Downlink 4CA 4X4 MIMO Maximum Conducted Power

Combination	PCC									SCC				SCC				SCC				Tx Power		
	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) (1)	LTE Tx Power with DL CA Enabled(dBm) (2)	Deviaion (2)-(1)
2A-2A-[4A]-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.58	0.04
2A-[2A]-4A-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.51	-0.03
[2A]-2A-4A-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.52	-0.02
2A-2A-[4A]-[4A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.47	-0.07
2A-[2A]-[4A]-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.45	-0.09
[2A]-2A-[4A]-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.53	-0.01
[2A]-[2A]-4A-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.45	-0.09
2A-[2A]-[4A]-[4A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.51	-0.03
[2A]-2A-[4A]-[4A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.53	-0.01
[2A]-[2A]-[4A]-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.47	-0.07
[2A]-[2A]-[4A]-[4A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.54	24.45	-0.09
[2A]-2A-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.15	-0.05
2A-[2A]-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.21	0.01
2A-2A-[4A]-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.12	-0.08
2A-2A-4A-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.15	-0.05
[2A]-[2A]-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.18	-0.02
[2A]-2A-[4A]-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.18	-0.02
[2A]-2A-4A-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.1	-0.1
2A-[2A]-[4A]-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.23	0.03
2A-[2A]-4A-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.12	-0.08
2A-2A-[4A]-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.22	0.02
[2A]-[2A]-[4A]-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.25	0.05
[2A]-[2A]-4A-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.25	0.05
[2A]-2A-[4A]-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.11	-0.09
2A-[2A]-[4A]-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.16	-0.04
[2A]-[2A]-[4A]-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.2	24.14	-0.06
2A-2A-[4A]-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.54	24.51	-0.03
2A-[2A]-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.54	24.52	-0.02
[2A]-2A-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.54	24.46	-0.08
2A-[2A]-[4A]-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.54	24.56	0.02
[2A]-2A-[4A]-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.54	24.58	0.04
[2A]-[2A]-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.54	24.53	-0.01
[2A]-[2A]-[4A]-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.54	24.47	-0.07
[2A]-2A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.22	0.02
2A-[2A]-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.1	-0.1
2A-2A-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.14	-0.06
[2A]-[2A]-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.15	-0.05
[2A]-2A-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.16	-0.04
2A-[2A]-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.19	-0.01
[2A]-[2A]-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.25	0.05
[2A]-2A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.28	24.33	0.05
2A-[2A]-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.28	24.2	-0.08
2A-2A-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.28	24.2	-0.08
[2A]-[2A]-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.28	24.32	0.04
[2A]-2A-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.28	24.27	-0.01
2A-[2A]-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.28	24.26	-0.02
[2A]-[2A]-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.28	24.25	-0.03
[2A]-2A-4A-12A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.54	24.55	0.01

2A-[2A]-4A-12A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.54	24.52	-0.02
2A-2A-[4A]-12A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.54	24.44	-0.1
[2A]-[2A]-4A-12A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.54	24.55	0.01
[2A]-2A-[4A]-12A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.54	24.49	-0.05
2A-[2A]-[4A]-12A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.54	24.52	-0.02
[2A]-[2A]-[4A]-12A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.54	24.52	-0.02
[2A]-2A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.2	0
2A-[2A]-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.24	0.04
2A-2A-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.17	-0.03
[2A]-[2A]-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.16	-0.04
[2A]-2A-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.19	-0.01
2A-[2A]-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.14	-0.06
[2A]-[2A]-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.19	-0.01
[2A]-2A-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.87	24.84	-0.03
2A-[2A]-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.87	24.79	-0.08
2A-2A-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.87	24.8	-0.07
[2A]-[2A]-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.87	24.82	-0.05
[2A]-2A-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.87	24.92	0.05
2A-[2A]-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.87	24.79	-0.08
[2A]-[2A]-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.87	24.78	-0.09
2A-2A-[4A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.51	-0.03
2A-[2A]-4A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.5	-0.04
[2A]-2A-4A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.44	-0.1
2A-[2A]-[4A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.59	0.05
[2A]-2A-[4A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.47	-0.07
[2A]-[2A]-4A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.52	-0.02
[2A]-[2A]-[4A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68761	634.5	24.54	24.48	-0.06
[2A]-2A-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.2	24.2	0
2A-[2A]-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.2	24.13	-0.07
2A-2A-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.2	24.1	-0.1
[2A]-[2A]-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.2	24.15	-0.05
[2A]-2A-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.2	24.23	0.03
2A-[2A]-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.2	24.1	-0.1
[2A]-[2A]-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.2	24.14	-0.06
[2A]-2A-4A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.6	24.53	-0.07
2A-[2A]-4A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.6	24.6	0
2A-2A-[4A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.6	24.55	-0.05
[2A]-[2A]-4A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.6	24.54	-0.06
[2A]-2A-[4A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.6	24.51	-0.09
2A-[2A]-[4A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.6	24.58	-0.02
[2A]-[2A]-[4A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.6	24.62	0.02
2A-[2A]-5B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	5	5	2453	874.3	24.54	24.46	-0.08
[2A]-2A-5B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	5	5	2453	874.3	24.54	24.54	0
[2A]-[2A]-5B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	5	5	2453	874.3	24.54	24.52	-0.02
[2A]-2A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	2	20	1100	1980	24.28	24.3	0.02
2A-[2A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	2	20	1100	1980	24.28	24.19	-0.09
[2A]-[2A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	2	20	1100	1980	24.28	24.22	-0.06
[2A]-2A-12A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.54	24.48	-0.06
2A-[2A]-12A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.54	24.5	-0.04
2A-2A-12A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.54	24.48	-0.06

[2A]-[2A]-12A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.54	24.56	0.02
[2A]-2A-12A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.54	24.49	-0.05
2A-[2A]-12A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.54	24.47	-0.07
[2A]-[2A]-12A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.54	24.59	0.05
[2A]-2A-12A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.8	-0.07
2A-[2A]-12A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.84	-0.03
2A-2A-12A-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.87	0
[2A]-[2A]-12A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.8	-0.07
[2A]-2A-12A-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.9	0.03
2A-[2A]-12A-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.77	-0.1
[2A]-[2A]-12A-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.91	0.04
[2A]-2A-12A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.34	0.05
2A-[2A]-12A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.26	-0.03
2A-2A-12A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.32	0.03
[2A]-[2A]-12A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.2	-0.09
[2A]-2A-12A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.22	-0.07
2A-[2A]-12A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.31	0.02
[2A]-[2A]-12A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.29	24.2	-0.09
2A-2A-[66A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.54	24.54	0
2A-[2A]-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.54	24.59	0.05
[2A]-2A-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.54	24.44	-0.1
2A-[2A]-[66A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.54	24.45	-0.09
[2A]-2A-[66A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.54	24.44	-0.1
[2A]-[2A]-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.54	24.51	-0.03
[2A]-[2A]-[66A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68761	634.5	24.54	24.47	-0.07
2A-2A-[66A]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.24	-0.05
2A-[2A]-66A-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.2	-0.09
[2A]-2A-66A-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.24	-0.05
2A-[2A]-[66A]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.21	-0.08
[2A]-2A-[66A]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.23	-0.06
[2A]-[2A]-66A-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.27	-0.02
[2A]-[2A]-[66A]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	71	20	68761	634.5	24.29	24.33	0.04
2A-2A-[66A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.6	24.52	-0.08
2A-[2A]-66A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.6	24.61	0.01
[2A]-2A-66A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.6	24.58	-0.02
2A-[2A]-[66A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.6	24.51	-0.09
[2A]-2A-[66A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.6	24.56	-0.04
[2A]-[2A]-66A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.6	24.53	-0.07
[2A]-[2A]-[66A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.6	24.61	0.01
2C-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1044	1974.4	66	20	66786	2145	66	20	67236	2190	24.54	24.54	0
[2C]-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1044	1974.4	66	20	66786	2145	66	20	67236	2190	24.54	24.46	-0.08
2C-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1044	1974.4	66	20	66786	2145	66	20	67236	2190	24.54	24.48	-0.06
[2C]-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1044	1974.4	66	20	66786	2145	66	20	67236	2190	24.54	24.52	-0.02
[2C]-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1044	1974.4	66	20	66786	2145	66	20	67236	2190	24.54	24.48	-0.06
[2C]-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.29	24.19	-0.1
2C-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.29	24.34	0.05
2C-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.29	24.32	0.03
[2C]-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.29	24.34	0.05
[2C]-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.29	24.24	-0.05
2C-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.29	24.27	-0.02

[2C]-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1098	1979.8	24.29	24.19	-0.1
2A-[4A]-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.54	24.54	0
[2A]-4A-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.54	24.52	-0.02
2A-[4A]-[4A]-5A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.54	24.57	0.03
[2A]-[4A]-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.54	24.58	0.04
[2A]-[4A]-[4A]-5A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.54	24.45	-0.09
[2A]-4A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.2	24.12	-0.08
2A-[4A]-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.2	24.22	0.02
2A-4A-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.2	24.14	-0.06
[2A]-[4A]-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.2	24.25	0.05
[2A]-4A-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.2	24.16	-0.04
2A-[4A]-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.2	24.11	-0.09
[2A]-[4A]-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.2	24.11	-0.09
[2A]-4A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.28	24.28	0
2A-[4A]-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.28	24.33	0.05
[2A]-[4A]-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.28	24.31	0.03
2A-[4A]-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.28	24.27	-0.01
[2A]-[4A]-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.28	24.32	0.04
2A-[4A]-4A-12A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.54	24.46	-0.08
[2A]-4A-4A-12A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.54	24.51	-0.03
2A-[4A]-[4A]-12A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.54	24.47	-0.07
[2A]-[4A]-4A-12A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.54	24.47	-0.07
[2A]-[4A]-[4A]-12A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.54	24.58	0.04
[2A]-4A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.2	24.23	0.03
2A-[4A]-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.2	24.15	-0.05
2A-4A-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.2	24.19	-0.01
[2A]-[4A]-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.2	24.17	-0.03
[2A]-4A-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.2	24.18	-0.02
2A-[4A]-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.2	24.17	-0.03
[2A]-[4A]-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.2	24.17	-0.03
2A-[4A]-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.87	24.8	-0.07
[2A]-4A-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.87	24.8	-0.07
2A-[4A]-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.87	24.78	-0.09
[2A]-[4A]-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.87	24.92	0.05
[2A]-[4A]-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.87	24.82	-0.05
[2A]-4A-5B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	5	10	2525	881.5	5	5	2453	874.3	24.54	24.45	-0.09
2A-[4A]-5B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	5	10	2525	881.5	5	5	2453	874.3	24.54	24.48	-0.06
[2A]-[4A]-5B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	5	10	2525	881.5	5	5	2453	874.3	24.54	24.56	0.02
[2A]-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.2	24.12	-0.08
2A-[4A]-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.2	24.19	-0.01
[2A]-[4A]-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.2	24.11	-0.09
[2A]-4A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	4	20	2175	2132.5	24.28	24.21	-0.07
2A-[4A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	4	20	2175	2132.5	24.28	24.24	-0.04
[2A]-[4A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	4	20	2175	2132.5	24.28	24.3	0.02
2A-[4A]-12B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.54	24.59	0.05
[2A]-4A-12B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.54	24.58	0.04
[2A]-[4A]-12B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.54	24.55	0.01
[2A]-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.2	24.12	-0.08
2A-[4A]-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.2	24.1	-0.1
[2A]-[4A]-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.2	24.2	0

[2A]-4A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	4	20	2175	2132.5	24.87	24.81	-0.06
2A-[4A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	4	20	2175	2132.5	24.87	24.77	-0.1
[2A]-[4A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	4	20	2175	2132.5	24.87	24.81	-0.06
2A-[7A]-7A-13A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	13	10	5230	751	24.54	24.46	-0.08
[2A]-7A-7A-13A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	13	10	5230	751	24.54	24.58	0.04
2A-[7A]-[7A]-13A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	13	10	5230	751	24.54	24.51	-0.03
[2A]-[7A]-7A-13A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	13	10	5230	751	24.54	24.54	0
[2A]-[7A]-[7A]-13A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	13	10	5230	751	24.54	24.46	-0.08
[2A]-7A-7A-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	13	10	5230	751	22.4	22.43	0.03
2A-[7A]-7A-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	13	10	5230	751	22.4	22.36	-0.04
2A-7A-[7A]-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	13	10	5230	751	22.4	22.36	-0.04
[2A]-[7A]-7A-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	13	10	5230	751	22.4	22.45	0.05
[2A]-7A-[7A]-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	13	10	5230	751	22.4	22.44	0.04
2A-[7A]-[7A]-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	13	10	5230	751	22.4	22.34	-0.06
[2A]-[7A]-[7A]-13A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	13	10	5230	751	22.4	22.3	-0.1
2A-[7A]-7A-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.44	24.44	0
[2A]-7A-7A-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.44	24.38	-0.06
2A-[7A]-[7A]-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.44	24.45	0.01
[2A]-[7A]-7A-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.44	24.47	0.03
[2A]-[7A]-[7A]-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.44	24.46	0.02
2A-7A-7A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.58	0.04
2A-[7A]-7A-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.58	0.04
[2A]-7A-7A-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.59	0.05
2A-[7A]-7A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.44	-0.1
2A-[7A]-[7A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.58	0.04
[2A]-7A-7A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.56	0.02
[2A]-[7A]-7A-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.48	-0.06
2A-[7A]-[7A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.46	-0.08
[2A]-[7A]-7A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.52	-0.02
2A-[7A]-[7A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.48	-0.06
[2A]-[7A]-[7A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3350	2680	66	20	66786	2145	24.54	24.53	-0.01
[2A]-7A-7A-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.3	-0.1
2A-[7A]-7A-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.31	-0.09
2A-7A-[7A]-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.32	-0.08
2A-7A-7A-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.33	-0.07
[2A]-[7A]-7A-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.38	-0.02
[2A]-7A-[7A]-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.37	-0.03
[2A]-7A-7A-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.32	-0.08
2A-[7A]-[7A]-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.4	0
2A-[7A]-7A-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.42	0.02
2A-7A-[7A]-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.43	0.03
[2A]-[7A]-[7A]-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.39	-0.01
[2A]-[7A]-7A-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.44	0.04
[2A]-7A-[7A]-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.3	-0.1
2A-[7A]-[7A]-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.39	-0.01
[2A]-[7A]-[7A]-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	2850	2630	2	20	900	1960	66	20	66786	2145	22.4	22.44	0.04
[2A]-7A-7A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.22	-0.07
2A-[7A]-7A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.3	0.01
2A-7A-7A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.2	-0.09

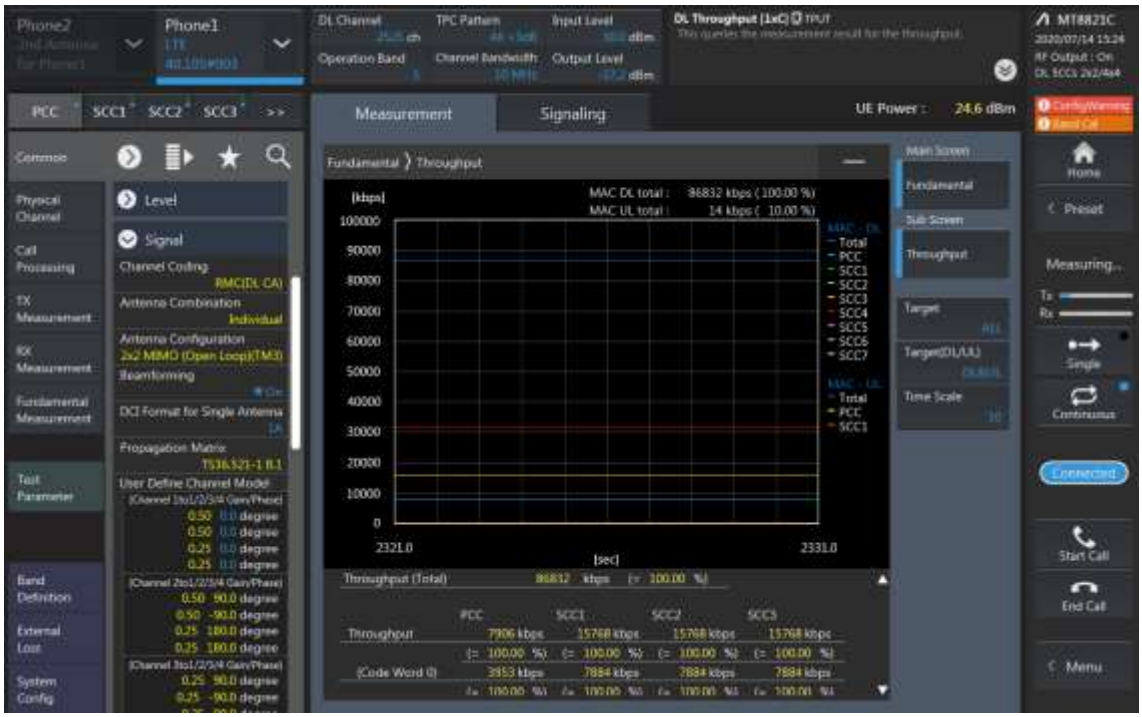
[2A]-[7A]-7A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.3	0.01
[2A]-7A-7A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.21	-0.08
2A-[7A]-[7A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.3	0.01
2A-[7A]-7A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.29	0
[2A]-[7A]-[7A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.29	0
[2A]-[7A]-7A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.3	0.01
2A-[7A]-[7A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.34	0.05
[2A]-[7A]-[7A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3350	2680	24.29	24.28	-0.01
2A-7C-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	66	20	66786	2145	24.54	24.5	-0.04
2A-[7C]-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	66	20	66786	2145	24.54	24.58	0.04
[2A]-7C-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	66	20	66786	2145	24.54	24.58	0.04
2A-[7C]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	66	20	66786	2145	24.54	24.54	0
[2A]-7C-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	66	20	66786	2145	24.54	24.52	-0.02
[2A]-[7C]-66A	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	66	20	66786	2145	24.54	24.44	-0.1
[2A]-[7C]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	7	20	3100	2655	7	20	3298	2674.8	66	20	66786	2145	24.54	24.57	0.03
[2A]-7C-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	66	20	66786	2145	22.4	22.3	-0.1
2A-[7C]-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	66	20	66786	2145	22.4	22.45	0.05
2A-7C-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	66	20	66786	2145	22.4	22.4	0
[2A]-[7C]-66A	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	66	20	66786	2145	22.4	22.44	0.04
[2A]-7C-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	66	20	66786	2145	22.4	22.42	0.02
2A-[7C]-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	66	20	66786	2145	22.4	22.4	0
[2A]-[7C]-[66A]	7	15	21375	2562.5	3375	2682.5	QPSK	1	0	7	20	3204	2665.4	2	20	900	1960	66	20	66786	2145	22.4	22.36	-0.04
[2A]-7C-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.29	24.31	0.02
2A-[7C]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.29	24.23	-0.06
2A-7C-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.29	24.3	0.01
[2A]-[7C]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.29	24.27	-0.02
[2A]-7C-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.29	24.28	-0.01
2A-[7C]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.29	24.2	-0.09
[2A]-[7C]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	7	20	3100	2655	7	20	3298	2674.8	24.29	24.2	-0.09
2A-12A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.54	22.53	-0.01
[2A]-12A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.54	22.54	0
2A-12A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.54	22.48	-0.06
[2A]-12A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.54	22.51	-0.03
[2A]-12A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.54	22.56	0.02
2A-12A-[66A]-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.8	-0.07
[2A]-12A-66A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.84	-0.03
2A-12A-[66A]-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.89	0.02
[2A]-12A-[66A]-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.87	0
[2A]-12A-[66A]-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.84	-0.03
[2A]-12A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.29	24.31	0.02
2A-12A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.29	24.19	-0.1
2A-12A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.29	24.31	0.02

[2A]-12A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.29	24.21	-0.08
[2A]-12A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.29	24.29	0
2A-12A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.29	24.29	0
[2A]-12A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	10	5095	737.5	24.29	24.34	0.05
2A-12A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	22.54	22.53	-0.01
[2A]-12A-66C	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	22.54	22.5	-0.04
[2A]-12A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	22.54	22.59	0.05
[2A]-12A-66C	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.87	24.85	-0.02
2A-12A-[66C]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.87	24.88	0.01
[2A]-12A-[66C]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.87	24.89	0.02
[2A]-12A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	12	10	5095	737.5	24.29	24.19	-0.1
2A-12A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	12	10	5095	737.5	24.29	24.21	-0.08
[2A]-12A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	12	10	5095	737.5	24.29	24.26	-0.03
2A-13A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	22.54	22.44	-0.1
[2A]-13A-66C	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	22.54	22.49	-0.05
[2A]-13A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	22.54	22.55	0.01
2A-13A-[66C]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.44	24.45	0.01
[2A]-13A-66C	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.44	24.39	-0.05
[2A]-13A-[66C]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.44	24.49	0.05
2A-13A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	13	10	5230	751	24.29	24.26	-0.03
[2A]-13A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	13	10	5230	751	24.29	24.32	0.03
[2A]-13A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	13	10	5230	751	24.29	24.25	-0.04
2A-[66A]-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	22.54	22.47	-0.07
[2A]-66A-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	22.54	22.49	-0.05
2A-[66A]-[66A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	22.54	22.58	0.04
[2A]-[66A]-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	22.54	22.44	-0.1
[2A]-[66A]-[66A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68761	634.5	22.54	22.55	0.01
[2A]-66A-66A-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	71	20	68761	634.5	24.29	24.23	-0.06
2A-[66A]-66A-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	71	20	68761	634.5	24.29	24.21	-0.08
2A-66A-[66A]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	71	20	68761	634.5	24.29	24.29	0
[2A]-[66A]-66A-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	71	20	68761	634.5	24.29	24.21	-0.08
[2A]-66A-[66A]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	71	20	68761	634.5	24.29	24.27	-0.02
2A-[66A]-[66A]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	71	20	68761	634.5	24.29	24.28	-0.01
[2A]-[66A]-[66A]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	71	20	68761	634.5	24.29	24.24	-0.05
[2A]-66A-66A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.6	24.59	-0.01
2A-[66A]-66A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.6	24.56	-0.04
[2A]-[66A]-66A-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.6	24.62	0.02
2A-[66A]-[66A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.6	24.56	-0.04
[2A]-[66A]-[66A]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.6	24.63	0.03
2A-[66C]-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68761	634.5	22.54	22.59	0.05
[2A]-66C-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68761	634.5	22.54	22.57	0.03
[2A]-[66C]-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68761	634.5	22.54	22.46	-0.08
2A-[66C]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	71	20	68761	634.5	24.29	24.32	0.03
[2A]-66C-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	71	20	68761	634.5	24.29	24.19	-0.1
[2A]-[66C]-71A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	71	20	68761	634.5	24.29	24.26	-0.03
2A-[66C]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.6	24.63	0.03
[2A]-66C-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.6	24.6	0
[2A]-[66C]-71A	71	5	133442	695	68906	649	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.6	24.5	-0.1
[4A]-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	24.2	24.2	0
4A-[4A]-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	24.2	24.22	0.02
[4A]-[4A]-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	24.2	24.12	-0.08
[4A]-4A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	4	20	2175	2132.5	4	10	2350	2150	24.28	24.31	0.03
4A-[4A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	4	20	2175	2132.5	4	10	2350	2150	24.28	24.27	-0.01
[4A]-[4A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	4	20	2175	2132.5	4	10	2350	2150	24.28	24.24	-0.04
[4A]-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	24.2	24.16	-0.04
4A-[4A]-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	24.2	24.24	0.04
[4A]-[4A]-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	24.2	24.15	-0.05
[4A]-4A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	4	20	2175	2132.5	4	10	2350	2150	24.87	24.77	-0.1
4A-[4A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	4	20	2175	2132.5	4	10	2350	2150	24.87	24.91	0.04
[4A]-[4A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	4	20	2175	2132.5	4	10	2350	2150	24.87	24.86	-0.01

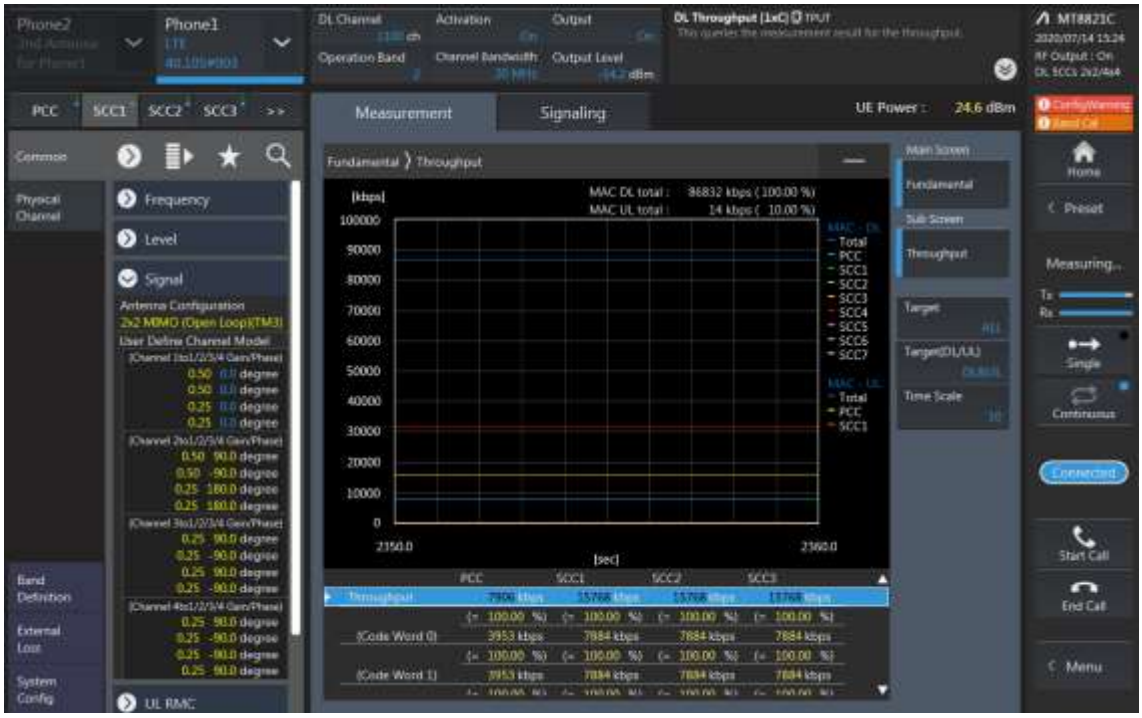
5A-5A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2450	874	66	20	66786	2145	66	20	67236	2190	24.28	24.2	-0.08
5A-5A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2450	874	66	20	66786	2145	66	20	67236	2190	24.28	24.18	-0.1
5A-5A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	5	10	2525	881.5	5	5	2625	891.5	24.29	24.33	0.04
5A-5A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	5	10	2525	881.5	5	5	2625	891.5	24.29	24.2	-0.09
5A-5A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	5	10	2525	881.5	5	5	2625	891.5	24.29	24.31	0.02
5A-5A-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2450	874	66	15	66786	2145	66	5	66879	2154.3	24.28	24.29	0.01
5A-5A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	5	10	2525	881.5	5	5	2625	891.5	24.29	24.32	0.03
5A-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2450	874	66	20	66786	2145	66	20	66984	2164.8	24.28	24.33	0.05
5A-5A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	5	10	2525	881.5	5	5	2625	891.5	24.29	24.28	-0.01
[2A]-46A-46A-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	47090	5180	66	20	66786	2145	22.54	22.58	0.04
2A-46A-46A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	47090	5180	66	20	66786	2145	22.54	22.57	0.03
[2A]-46A-46A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	47090	5180	66	20	66786	2145	22.54	22.51	-0.03
[2A]-46A-46A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	46	20	50665	5537.5	46	20	47090	5180	24.29	24.33	0.04
2A-46A-46A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	46	20	50665	5537.5	46	20	47090	5180	24.29	24.33	0.04
[2A]-46A-46A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	46	20	50665	5537.5	46	20	47090	5180	24.29	24.24	-0.05
[4A]-46A-46C	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.2	24.21	0.01
[4A]-46D	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.2	24.17	-0.03

LTE Down Link 5CA 4x4 MIMO Call Setup

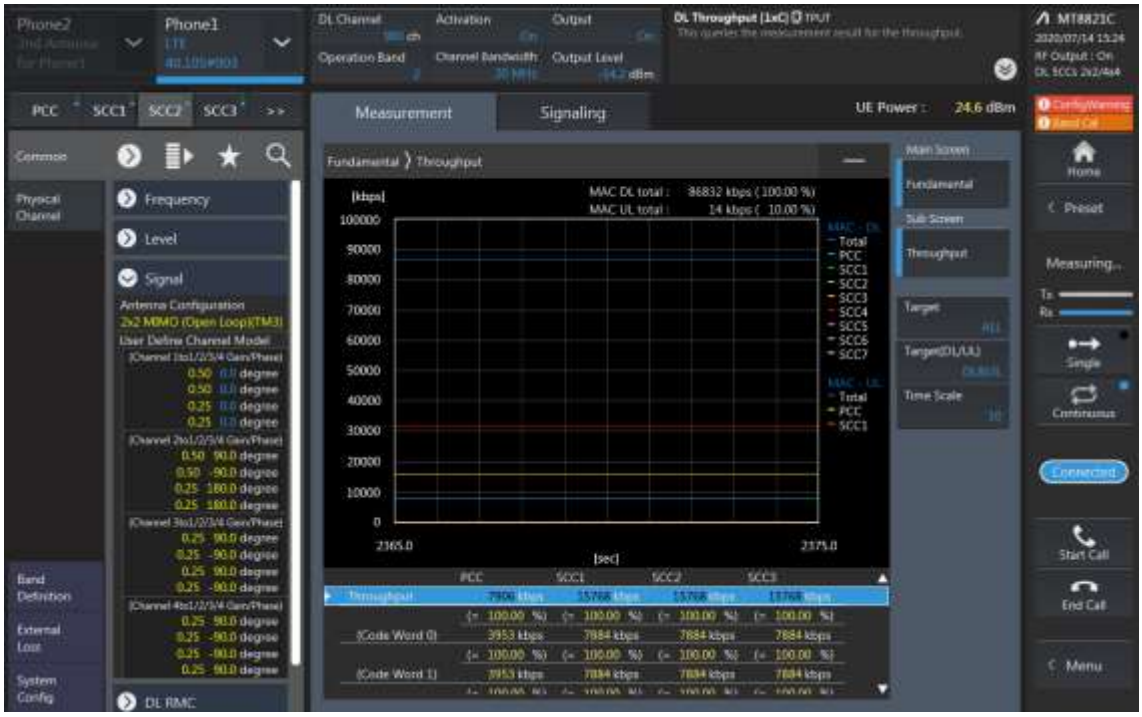
PCC Setting: Channel /RB/BW/Modulation



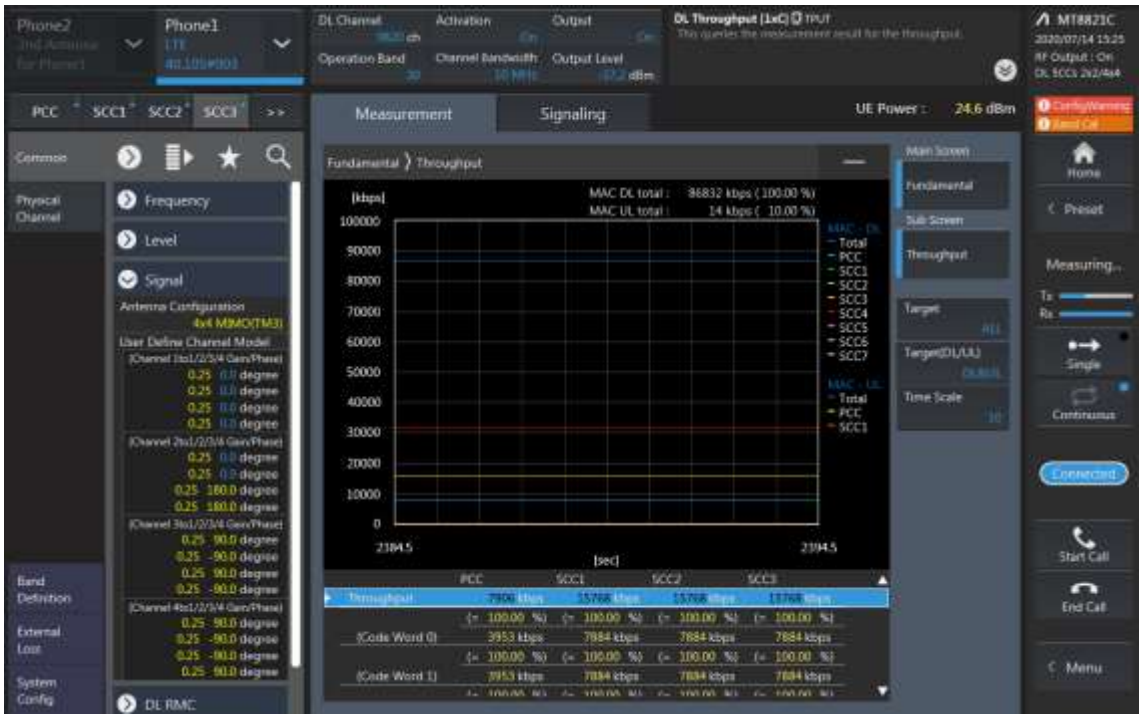
SCC1 Setting : Channel /RB/BW/Modulation



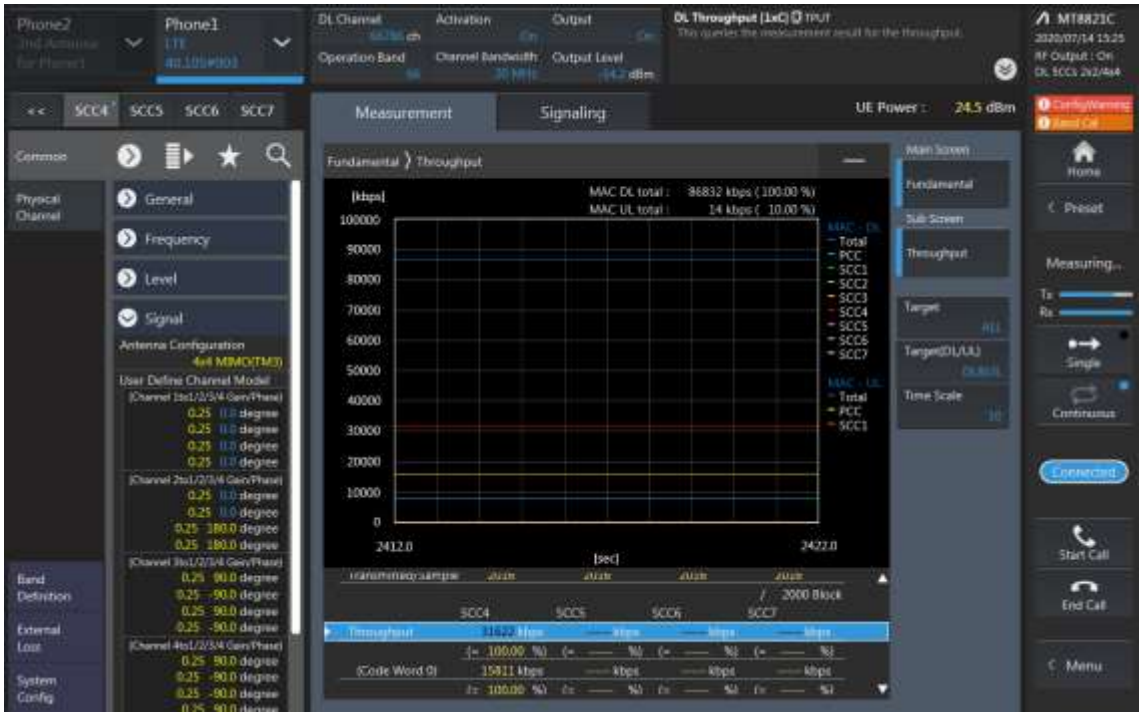
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



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



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



LTE Downlink 5CA 4X4 MIMO Maximum Conducted Power

Combination	PCC									SCC				SCC				SCC				SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled(dBm) (2)	Deviaion (2)-(1)
[2A]-2A-5A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.56	0.02
2A-[2A]-5A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.52	-0.02
2A-2A-5A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.58	0.04
[2A]-[2A]-5A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.51	-0.03
[2A]-2A-5A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.5	-0.04
2A-[2A]-5A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.45	-0.09
2A-2A-5A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.45	-0.09
[2A]-[2A]-5A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.52	-0.02
[2A]-2A-5A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.45	-0.09
2A-[2A]-5A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.57	0.03
[2A]-[2A]-5A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.54	24.48	-0.06
[2A]-2A-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.27	-0.01
2A-[2A]-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.19	-0.09
2A-2A-5A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.26	-0.02
[2A]-[2A]-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.23	-0.05
[2A]-2A-5A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.29	0.01
2A-[2A]-5A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.23	-0.05
2A-2A-5A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.2	-0.08
[2A]-[2A]-5A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.24	-0.04
[2A]-2A-5A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.31	0.03
2A-[2A]-5A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.18	-0.1
[2A]-[2A]-5A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.21	-0.07
[2A]-2A-5A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.2	-0.09
2A-[2A]-5A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.23	-0.06
2A-2A-5A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.34	0.05
2A-2A-5A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.19	-0.1
[2A]-[2A]-5A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.28	-0.01
[2A]-2A-5A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.24	-0.05
[2A]-2A-5A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.24	-0.05
2A-[2A]-5A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.34	0.05
2A-[2A]-5A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.28	-0.01
2A-2A-5A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.27	-0.02
[2A]-[2A]-5A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.3	0.01
[2A]-[2A]-5A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.27	-0.02
[2A]-2A-5A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.29	0
2A-[2A]-5A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.3	0.01
[2A]-[2A]-5A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.23	-0.06
[2A]-2A-5A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.54	24.55	0.01
2A-[2A]-5A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.54	24.44	-0.1
2A-2A-5A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.54	24.52	-0.02
[2A]-[2A]-5A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.54	24.56	0.02
[2A]-2A-5A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.54	24.57	0.03
2A-[2A]-5A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.54	24.55	0.01
[2A]-[2A]-5A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	15	66786	2145	66	5	66879	2154.3	24.54	24.59	0.05
[2A]-2A-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.28	24.32	0.04
2A-[2A]-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.28	24.3	0.02
2A-2A-5A-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.28	24.18	-0.1
[2A]-[2A]-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.28	24.27	-0.01
[2A]-2A-5A-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.28	24.31	0.03

2A-[2A]-5A-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.28	24.33	0.05
[2A]-[2A]-5A-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.28	24.3	0.02
[2A]-2A-5A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.23	-0.06
2A-[2A]-5A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.26	-0.03
2A-2A-5A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.27	-0.02
[2A]-[2A]-5A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.21	-0.08
[2A]-2A-5A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.24	-0.05
2A-[2A]-5A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.26	-0.03
[2A]-[2A]-5A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.31	0.02
[2A]-2A-5A-66C	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.54	24.5	-0.04
2A-[2A]-5A-66C	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.54	24.54	0
2A-2A-5A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.54	24.47	-0.07
[2A]-[2A]-5A-66C	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.54	24.52	-0.02
[2A]-2A-5A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.54	24.51	-0.03
2A-[2A]-5A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.54	24.47	-0.07
[2A]-[2A]-5A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.54	24.49	-0.05
[2A]-2A-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.28	24.22	-0.06
2A-[2A]-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.28	24.23	-0.05
2A-2A-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.28	24.33	0.05
[2A]-[2A]-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.28	24.21	-0.07
[2A]-2A-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.28	24.33	0.05
2A-[2A]-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.28	24.23	-0.05
[2A]-[2A]-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.28	24.24	-0.04
[2A]-2A-5A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.22	-0.07
2A-[2A]-5A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.27	-0.02
2A-2A-5A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.21	-0.08
[2A]-[2A]-5A-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.19	-0.1
[2A]-2A-5A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.22	-0.07
2A-[2A]-5A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.29	0
[2A]-[2A]-5A-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.29	24.28	-0.01
[2A]-2A-12B-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.54	24.48	-0.06
2A-[2A]-12B-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.54	24.51	-0.03
2A-2A-12B-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.54	24.46	-0.08
[2A]-[2A]-12B-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.54	24.48	-0.06
[2A]-2A-12B-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.54	24.53	-0.01
2A-[2A]-12B-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.54	24.5	-0.04
[2A]-[2A]-12B-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.54	24.47	-0.07
[2A]-2A-12B-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.88	0.01
2A-[2A]-12B-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.86	-0.01
2A-2A-12B-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.87	0
[2A]-[2A]-12B-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.8	-0.07
[2A]-2A-12B-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.78	-0.09
2A-[2A]-12B-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.9	0.03
[2A]-[2A]-12B-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.87	24.77	-0.1
[2A]-2A-12B-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.29	24.2	-0.09
2A-[2A]-12B-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.29	24.22	-0.07
2A-2A-12B-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.29	24.24	-0.05
[2A]-[2A]-12B-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.29	24.33	0.04
[2A]-2A-12B-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.29	24.25	-0.04

2A-[2A]-12B-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.29	24.19	-0.1
[2A]-[2A]-12B-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.29	24.26	-0.03
[2A]-2A-13A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.53	-0.01
2A-[2A]-13A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.46	-0.08
2A-2A-13A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.54	0
[2A]-[2A]-13A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.54	0
[2A]-2A-13A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.51	-0.03
2A-[2A]-13A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.44	-0.1
2A-2A-13A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.49	-0.05
[2A]-[2A]-13A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.52	-0.02
[2A]-2A-13A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.47	-0.07
2A-[2A]-13A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.52	-0.02
2A]-[2A]-13A-[66A]-[66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.54	24.52	-0.02
[2A]-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.43	-0.01
2A-[2A]-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.43	-0.01
2A-2A-13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.35	-0.09
[2A]-[2A]-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.39	-0.05
[2A]-2A-13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.47	0.03
2A-[2A]-13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.46	0.02
2A-2A-13A-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.34	-0.1
[2A]-[2A]-13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.35	-0.09
[2A]-2A-13A-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.46	0.02
2A-[2A]-13A-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.44	0
2A]-[2A]-13A-[66A]-[66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.44	24.47	0.03
[2A]-2A-13A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.28	-0.01
2A-[2A]-13A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.25	-0.04
2A-2A-13A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.2	-0.09
2A-2A-13A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.2	-0.09
[2A]-[2A]-13A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.32	0.03
[2A]-2A-13A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.28	-0.01
[2A]-2A-13A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.19	-0.1
2A-[2A]-13A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.27	-0.02
2A-[2A]-13A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.32	0.03
2A-2A-13A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.19	-0.1
[2A]-[2A]-13A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.29	0
[2A]-[2A]-13A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.23	-0.06
[2A]-2A-13A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.29	0
2A-[2A]-13A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.31	0.02
2A]-[2A]-13A-[66A]-[66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.19	-0.1
[2A]-2A-13A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.54	24.59	0.05
2A-[2A]-13A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.54	24.59	0.05
2A-2A-13A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.54	24.45	-0.09
[2A]-[2A]-13A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.54	24.48	-0.06
[2A]-2A-13A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.54	24.45	-0.09
2A-[2A]-13A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.54	24.54	0
[2A]-[2A]-13A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.54	24.5	-0.04
[2A]-2A-13A-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.44	24.43	-0.01
2A-[2A]-13A-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.44	24.35	-0.09
2A-2A-13A-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.44	24.39	-0.05
[2A]-[2A]-13A-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.44	24.49	0.05
[2A]-2A-13A-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.44	24.46	0.02

2A-[2A]-13A-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.44	24.35	-0.09
[2A]-[2A]-13A-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	24.44	24.4	-0.04
[2A]-2A-13A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.24	-0.05
2A-[2A]-13A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.27	-0.02
2A-2A-13A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.2	-0.09
[2A]-[2A]-13A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.32	0.03
[2A]-2A-13A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.23	-0.06
2A-[2A]-13A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.29	0
[2A]-[2A]-13A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.29	24.33	0.04
[2A]-5B-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.54	24.55	0.01
2A-5B-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.54	24.45	-0.09
[2A]-5B-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.54	24.59	0.05
2A-5B-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.54	24.48	-0.06
[2A]-5B-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.54	24.44	-0.1
[2A]-5B-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.28	24.19	-0.09
2A-5B-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.28	24.25	-0.03
[2A]-5B-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.28	24.18	-0.1
2A-5B-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.28	24.24	-0.04
[2A]-5B-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.28	24.28	0
[2A]-5B-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.32	0.03
2A-5B-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.23	-0.06
2A-5B-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.19	-0.1
[2A]-5B-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.19	-0.1
[2A]-5B-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.26	-0.03
2A-5B-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.29	0
[2A]-5B-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.32	0.03
[2A]-5B-66B	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	15	66786	2145	66	5	66879	2154.3	24.54	24.53	-0.01
2A-5B-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	15	66786	2145	66	5	66879	2154.3	24.54	24.56	0.02
[2A]-5B-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	15	66786	2145	66	5	66879	2154.3	24.54	24.49	-0.05
[2A]-5B-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	15	66786	2145	66	5	66879	2154.3	24.28	24.3	0.02
2A-5B-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	15	66786	2145	66	5	66879	2154.3	24.28	24.33	0.05
[2A]-5B-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	15	66786	2145	66	5	66879	2154.3	24.28	24.33	0.05
[2A]-5B-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.31	0.02
2A-5B-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.21	-0.08
[2A]-5B-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.32	0.03
[2A]-5B-66C	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2164.8	24.54	24.45	-0.09
2A-5B-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2164.8	24.54	24.48	-0.06
[2A]-5B-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2164.8	24.54	24.58	0.04
[2A]-5B-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.28	24.33	0.05
2A-5B-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.28	24.2	-0.08
[2A]-5B-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.28	24.21	-0.07
[2A]-5B-66C	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.25	-0.04
2A-5B-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.27	-0.02
[2A]-5B-[66C]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	66682	2134.6	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.29	24.29	0
[2A]-12B-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.54	24.57	0.03
2A-12B-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.54	24.53	-0.01
[2A]-12B-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.54	24.45	-0.09
2A-12B-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.54	24.59	0.05
[2A]-12B-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.54	24.56	0.02

[2A]-12B-66A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.77	-0.1
2A-12B-[66A]-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.84	-0.03
[2A]-12B-[66A]-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.84	-0.03
2A-12B-[66A]-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.77	-0.1
[2A]-12B-[66A]-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.87	24.87	0
[2A]-12B-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.29	24.3	0.01
2A-12B-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.29	24.22	-0.07
2A-12B-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.29	24.19	-0.1
[2A]-12B-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.29	24.26	-0.03
[2A]-12B-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.29	24.19	-0.1
2A-12B-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.29	24.26	-0.03
[2A]-12B-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.29	24.27	-0.02
[2A]-13A-66A-66B	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.54	24.46	-0.08
2A-13A-[66A]-66B	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.54	24.53	-0.01
2A-13A-66A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.54	24.58	0.04
[2A]-13A-[66A]-66B	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.54	24.57	0.03
[2A]-13A-66A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.54	24.45	-0.09
2A-13A-[66A]-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.54	24.58	0.04
[2A]-13A-[66A]-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.54	24.54	0
[2A]-13A-66A-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.44	24.46	0.02
2A-13A-[66A]-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.44	24.37	-0.07
2A-13A-66A-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.44	24.35	-0.09
[2A]-13A-[66A]-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.44	24.48	0.04
[2A]-13A-66A-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.44	24.41	-0.03
2A-13A-[66A]-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.44	24.39	-0.05
[2A]-13A-[66A]-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.44	24.44	0
[2A]-13A-66A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	13	10	5230	751	66	5	67168	2183.2	66	15	67261	2192.5	24.29	24.26	-0.03
2A-13A-[66A]-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	13	10	5230	751	66	5	67168	2183.2	66	15	67261	2192.5	24.29	24.26	-0.03
2A-13A-66A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	13	10	5230	751	66	5	67168	2183.2	66	15	67261	2192.5	24.29	24.21	-0.08
[2A]-13A-[66A]-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	13	10	5230	751	66	5	67168	2183.2	66	15	67261	2192.5	24.29	24.28	-0.01
[2A]-13A-66A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	13	10	5230	751	66	5	67168	2183.2	66	15	67261	2192.5	24.29	24.3	0.01
2A-13A-[66A]-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	13	10	5230	751	66	5	67168	2183.2	66	15	67261	2192.5	24.29	24.27	-0.02
[2A]-13A-[66A]-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	13	10	5230	751	66	5	67168	2183.2	66	15	67261	2192.5	24.29	24.31	0.02
[2A]-13A-66A-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	66	20	67236	2190	24.29	24.25	-0.04
2A-13A-[66A]-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	66	20	67236	2190	24.29	24.27	-0.02
2A-13A-66A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	66	20	67236	2190	24.29	24.21	-0.08
[2A]-13A-[66A]-66B	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	66	20	67236	2190	24.29	24.28	-0.01
[2A]-13A-66A-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	66	20	67236	2190	24.29	24.29	0
2A-13A-[66A]-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	66	20	67236	2190	24.29	24.21	-0.08
[2A]-13A-[66A]-[66B]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	66	20	67236	2190	24.29	24.3	0.01
[2A]-2A-46D	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.54	24.57	0.03
2A-[2A]-46D	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.54	24.57	0.03
[2A]-[2A]-46D	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.54	24.53	-0.01
[2A]-5A-46D	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.54	24.48	-0.06
[2A]-5A-46D	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.28	24.27	-0.01
[2A]-5A-46C-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.54	24.45	-0.09
2A-5A-46C-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.54	24.45	-0.09
[2A]-5A-46C-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.54	24.48	-0.06
[2A]-5A-46C-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.28	24.21	-0.07
2A-5A-46C-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.28	24.23	-0.05

[2A]-5A-46C-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.28	24.32	0.04
[2A]-5A-46C-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.29	24.28	-0.01
2A-5A-46C-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.29	24.2	-0.09
[2A]-5A-46C-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.29	24.28	-0.01
[2A]-5A-46A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.54	24.5	-0.04
2A-5A-46A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.54	24.46	-0.08
[2A]-5A-46A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.54	24.51	-0.03
2A-5A-46A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.54	24.58	0.04
[2A]-5A-46A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.54	24.57	0.03
[2A]-5A-46A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.28	24.19	-0.09
2A-5A-46A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.28	24.28	0
[2A]-5A-46A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.28	24.23	-0.05
2A-5A-46A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.28	24.18	-0.1
[2A]-5A-46A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	66	20	66786	2145	66	20	67236	2190	24.28	24.23	-0.05
[2A]-5A-46A-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	24.29	24.26	-0.03
2A-5A-46A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	24.29	24.24	-0.05
2A-5A-46A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	24.29	24.28	-0.01
[2A]-5A-46A-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	24.29	24.26	-0.03
[2A]-5A-46A-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	24.29	24.22	-0.07
2A-5A-46A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	24.29	24.19	-0.1
[2A]-5A-46A-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	24.29	24.31	0.02
[2A]-46A-46D	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.2	46	20	53144	5785.4	24.54	24.54	0
[2A]-46A-46C-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	66	20	66786	2145	24.54	24.45	-0.09
2A-46A-46C-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	66	20	66786	2145	24.54	24.53	-0.01
[2A]-46A-46C-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	66	20	66786	2145	24.54	24.45	-0.09
[2A]-46A-46C-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.29	24.3	0.01
2A-46A-46C-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.29	24.21	-0.08
[2A]-46A-46C-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.29	24.23	-0.06
[4A]-46A-46D	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.2	46	20	53144	5785.4	24.2	24.14	-0.06
46A-46D-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.2	46	20	53144	5785.4	24.29	24.22	-0.07

LTE Down Link 6CA 4x4 MIMO Call Setup

PCC Setting: Channel /RB/BW/Modulation

SCC1 Setting : Channel /RB/BW/Modulation

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

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

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

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

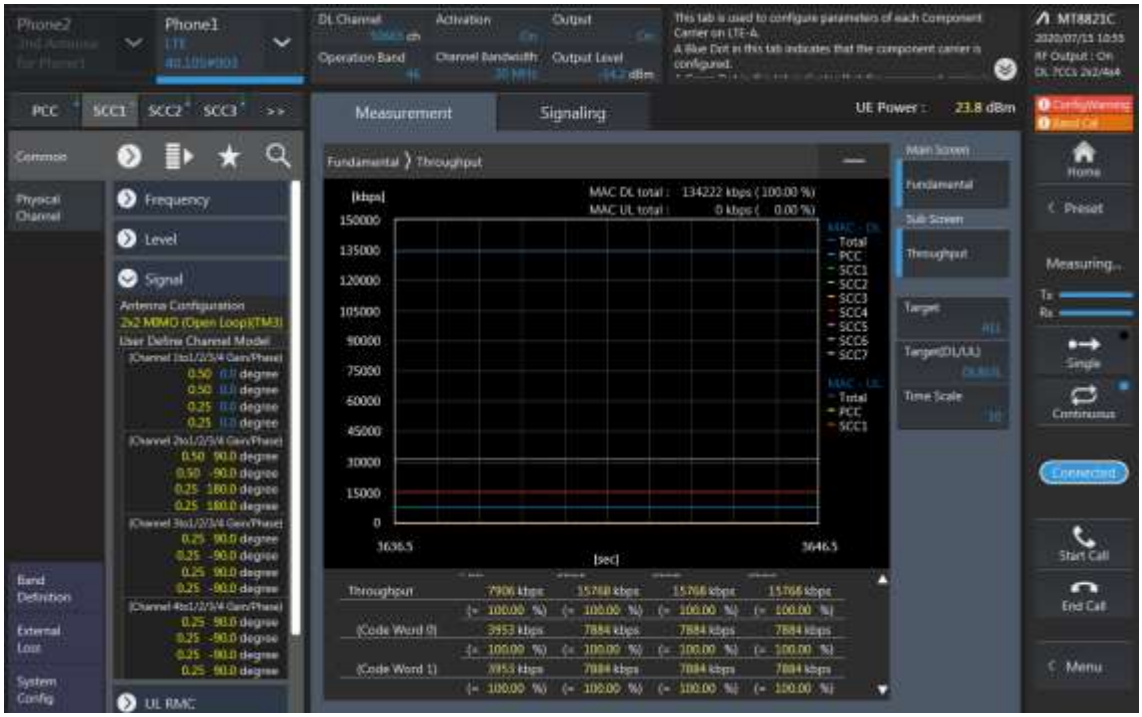
LTE Downlink 6CA 4X4 MIMO Maximum Conducted Power

Combination	PCC									SCC				SCC				SCC				SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
[2A]-13A-46E	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.54	24.49	-0.05
[2A]-13A-46E	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.44	24.48	0.04
13A-46E-[66A]	13	10	23230	782	5230	751	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.44	24.42	-0.02
13A-46E-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.31	0.02

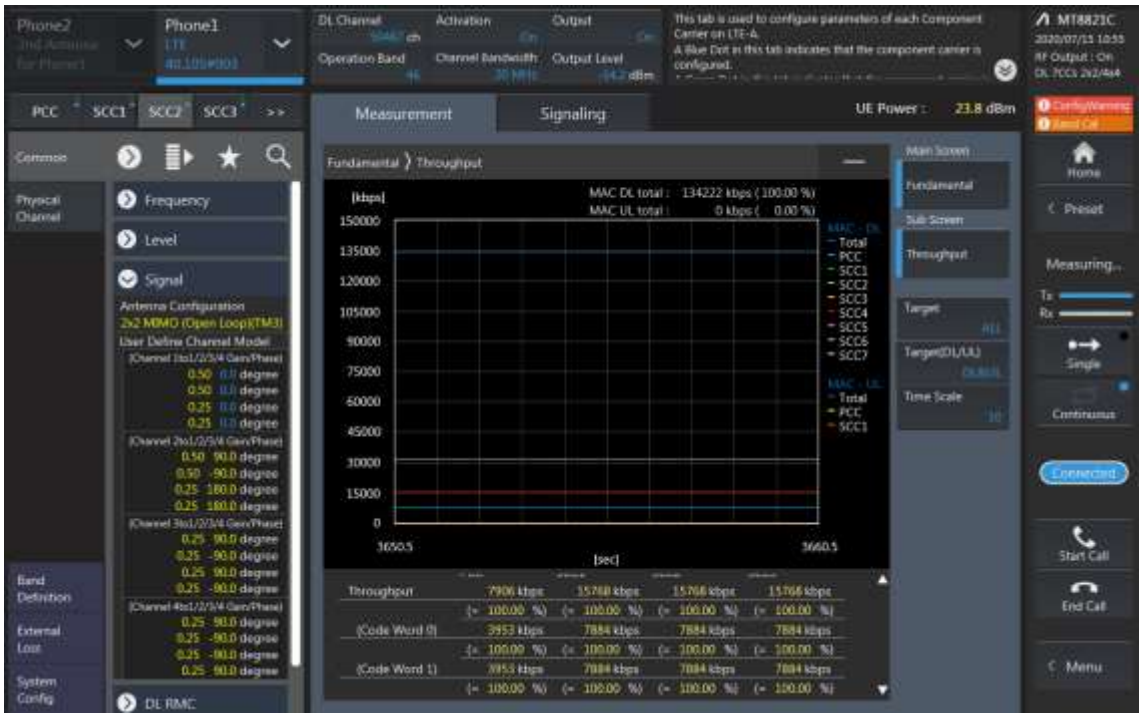
LTE Down Link 7CA 4x4 MIMO Call Setup

PCC Setting: Channel /RB/BW/Modulation

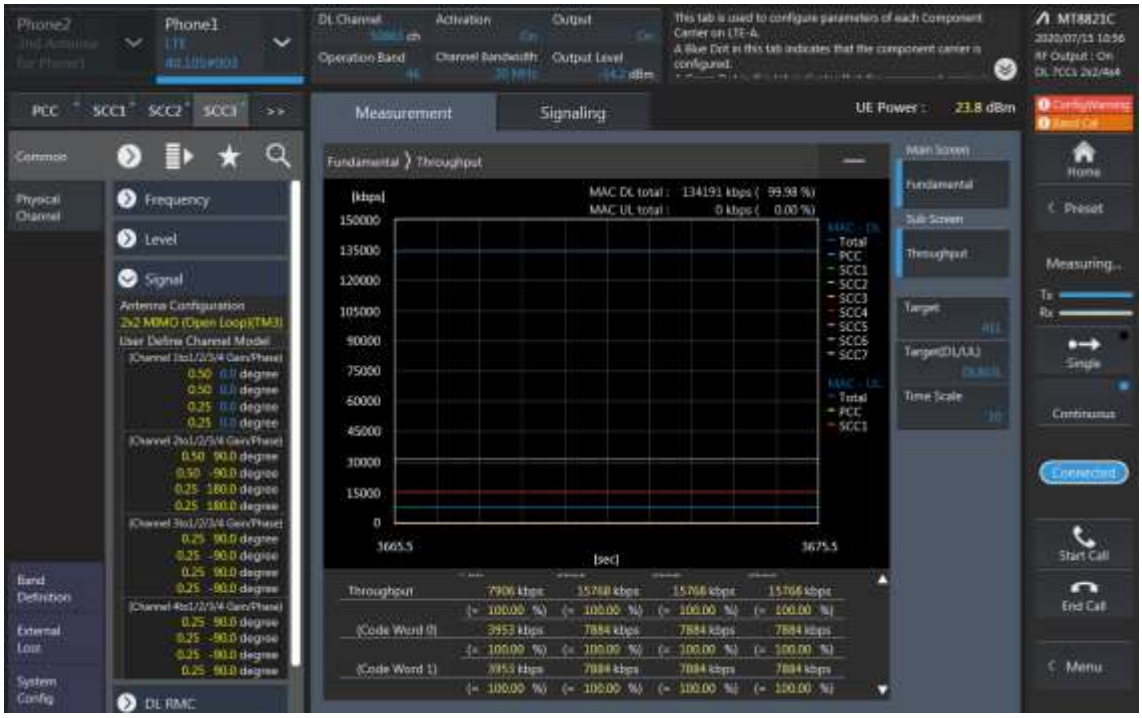
SCC1 Setting : Channel /RB/BW/Modulation



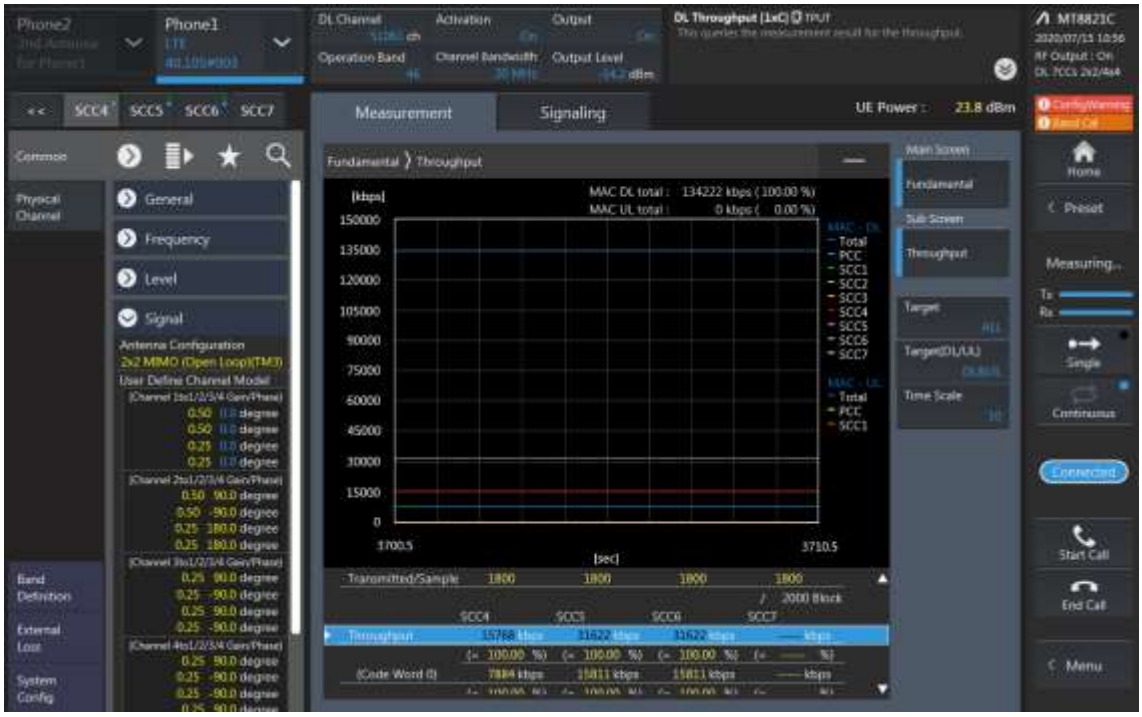
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



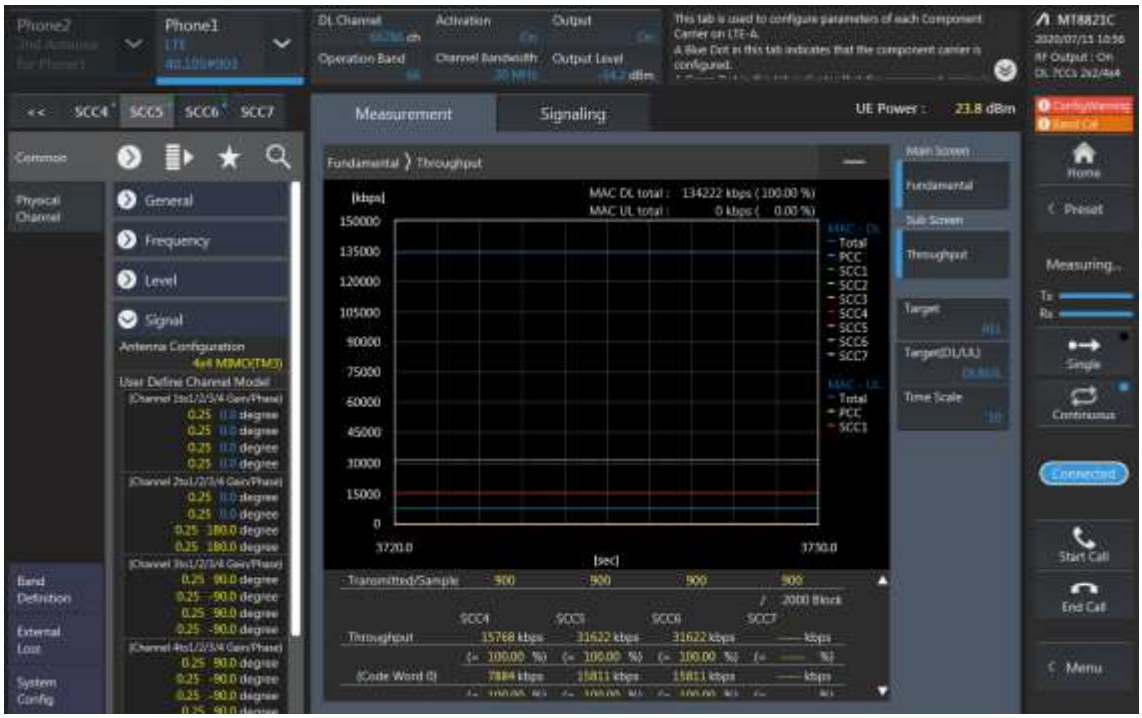
SCC3 Setting (Channel /RB/BW/Modulation) and call Connection



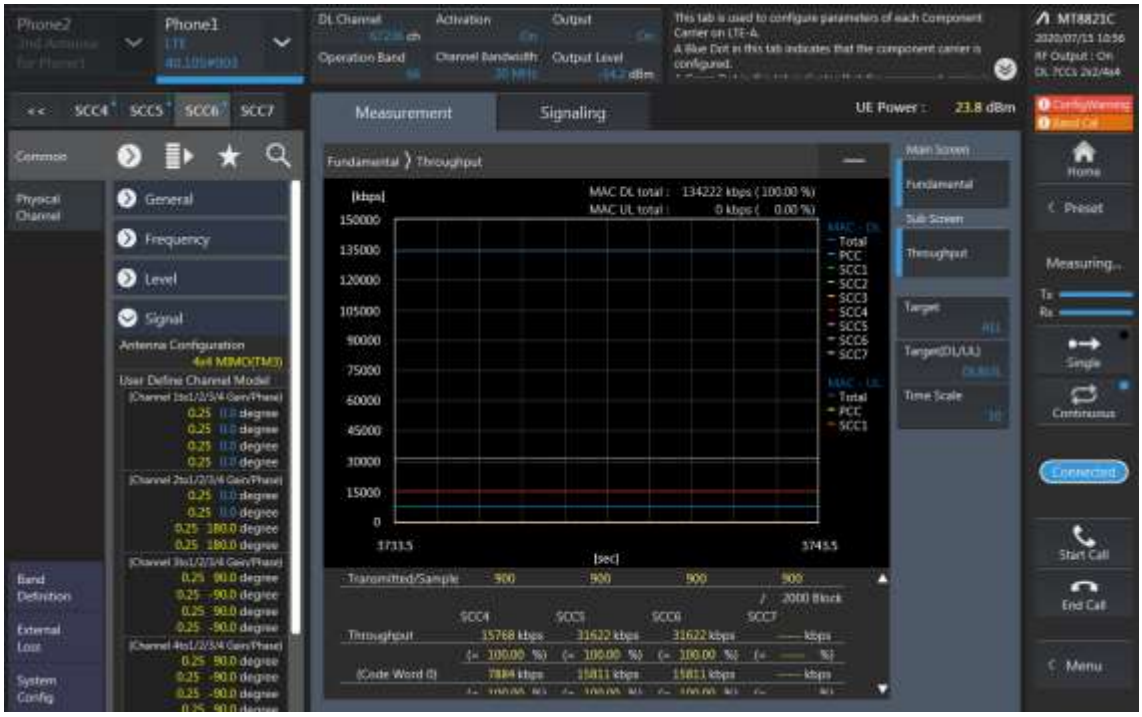
SCC4 Setting (Channel /RB/BW/Modulation) and call Connection



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



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



LTE Downlink 7CA 4X4 MIMO Maximum Conducted Power

Combination	PCC									SCC				SCC				SCC				SCC				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	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) (1)	LTE Tx Power with DL CA Enabled(dBm) (2)	Deviaion (2)-(1)
[2A]-5A-46E-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.54	24.46	-0.08
2A-5A-46E-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.54	24.51	-0.03
[2A]-5A-46E-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.54	24.53	-0.01
[2A]-5A-46E-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.28	24.24	-0.04
2A-5A-46E-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.28	24.29	0.01
[2A]-5A-46E-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	24.28	24.19	-0.09
[2A]-5A-46E-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.31	0.02
2A-5A-46E-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.3	0.01
[2A]-5A-46E-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.2	-0.09
[2A]-5A-46D-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.45	-0.09
2A-5A-46D-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.58	0.04
[2A]-5A-46D-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.51	-0.03
2A-5A-46D-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.46	-0.08
[2A]-5A-46D-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.44	-0.1
[2A]-5A-46D-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.28	24.26	-0.02
2A-5A-46D-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.28	24.22	-0.06
[2A]-5A-46D-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.28	24.18	-0.1
2A-5A-46D-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.28	24.18	-0.1
[2A]-5A-46D-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.28	24.19	-0.09
[2A]-5A-46D-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.26	-0.03
2A-5A-46D-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.22	-0.07
2A-5A-46D-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.3	0.01
[2A]-5A-46D-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.27	-0.02
[2A]-5A-46D-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.21	-0.08
2A-5A-46D-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.31	0.02
[2A]-5A-46D-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.2	-0.09
[2A]-13A-46D-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.48	-0.06
2A-13A-46D-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.57	0.03
[2A]-13A-46D-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.58	0.04
2A-13A-46D-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.45	-0.09
[2A]-13A-46D-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.54	24.56	0.02
[2A]-13A-46D-66A-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.44	24.39	-0.05
2A-13A-46D-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.44	24.45	0.01
[2A]-13A-46D-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.44	24.45	0.01
2A-13A-46D-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.44	24.44	0
[2A]-13A-46D-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.44	24.46	0.02
[2A]-13A-46D-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.23	-0.06
2A-13A-46D-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.26	-0.03

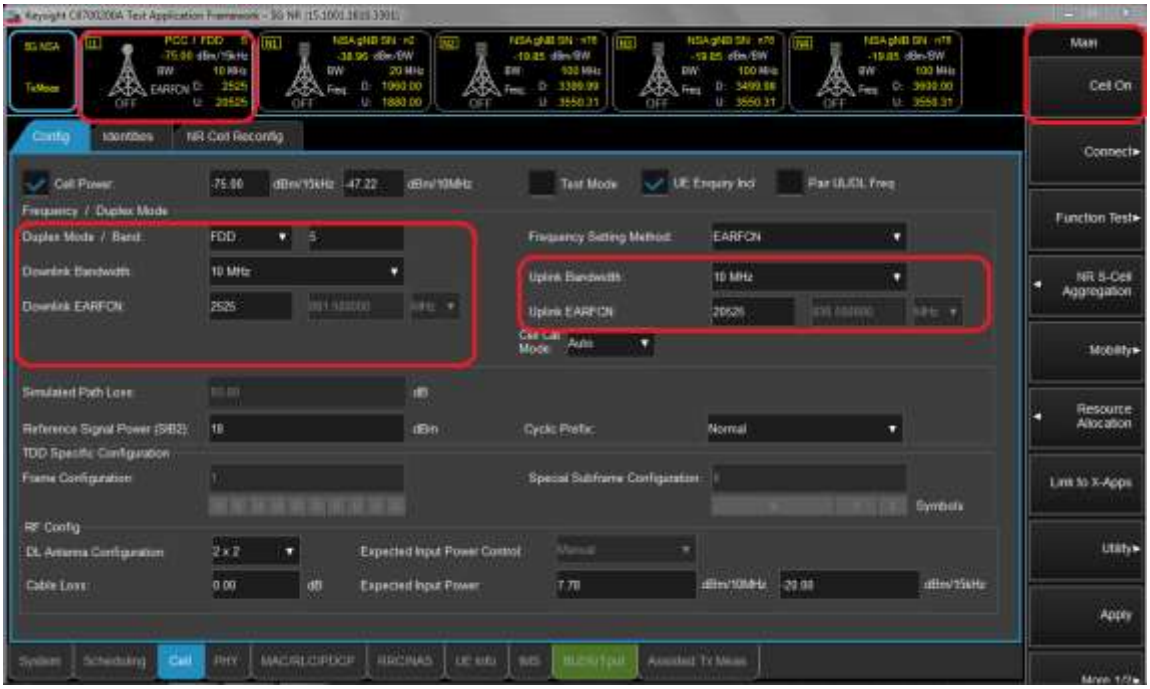
2A-13A-46D-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.19	-0.1
[2A]-13A-46D-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.22	-0.07
[2A]-13A-46D-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.23	-0.06
2A-13A-46D-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.27	-0.02
[2A]-13A-46D-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.29	24.28	-0.01
[2A]-46E-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.54	24.56	0.02
2A-46E-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.54	24.53	-0.01
[2A]-46E-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.54	24.45	-0.09
2A-46E-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.54	24.54	0
[2A]-46E-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.54	24.5	-0.04
[2A]-46E-66A-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.33	0.04
2A-46E-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.23	-0.06
2A-46E-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.33	0.04
[2A]-46E-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.22	-0.07
[2A]-46E-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.3	0.01
2A-46E-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.27	-0.02
[2A]-46E-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.34	0.05
5A-46E-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.28	24.25	-0.03
5A-46E-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.28	24.25	-0.03
5A-46E-[66A]-66A	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.27	-0.02
5A-46E-66A-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.25	-0.04
5A-46E-[66A]-[66A]	66	15	132047	1717.5	66511	2117.5	QPSK	1	74	66	20	67236	2190	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	50269	5497.9	24.29	24.31	0.02

2. 5G NR Call Box Setup

Procedure used to establish output Power measurement for NR Bands

Select operating band, BW and Channel.

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

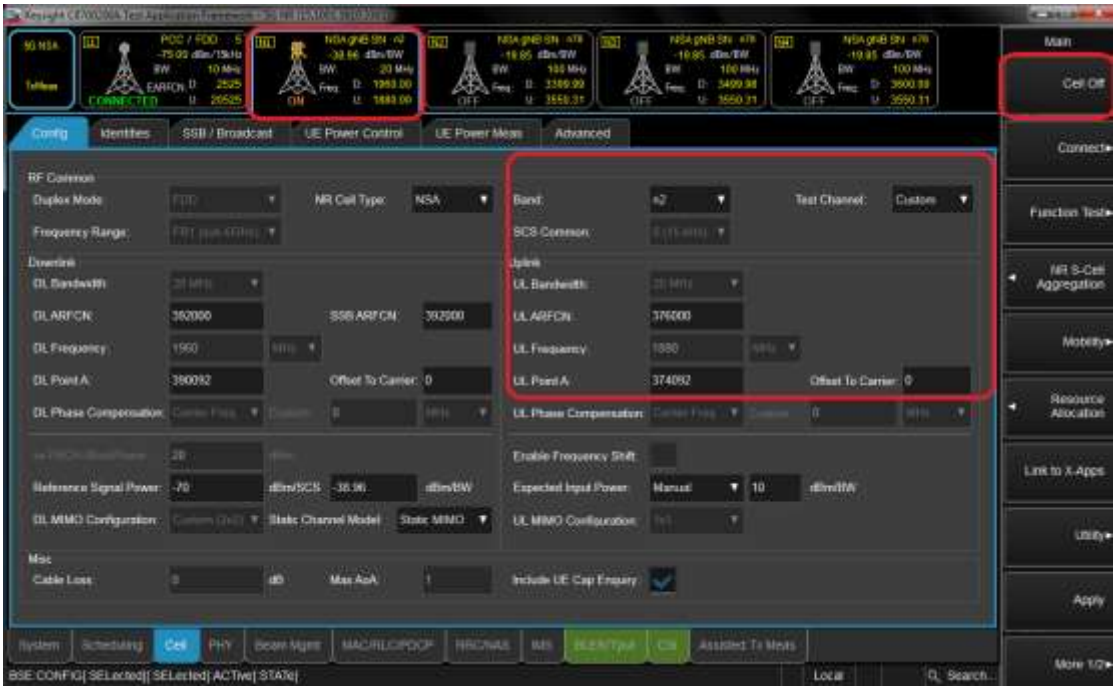


- Turn the Airplane Mode On and then turn the Airplane mode off.
- Select All down bits for UL Power control Mode in LTE.

Setup for NR Band

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

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

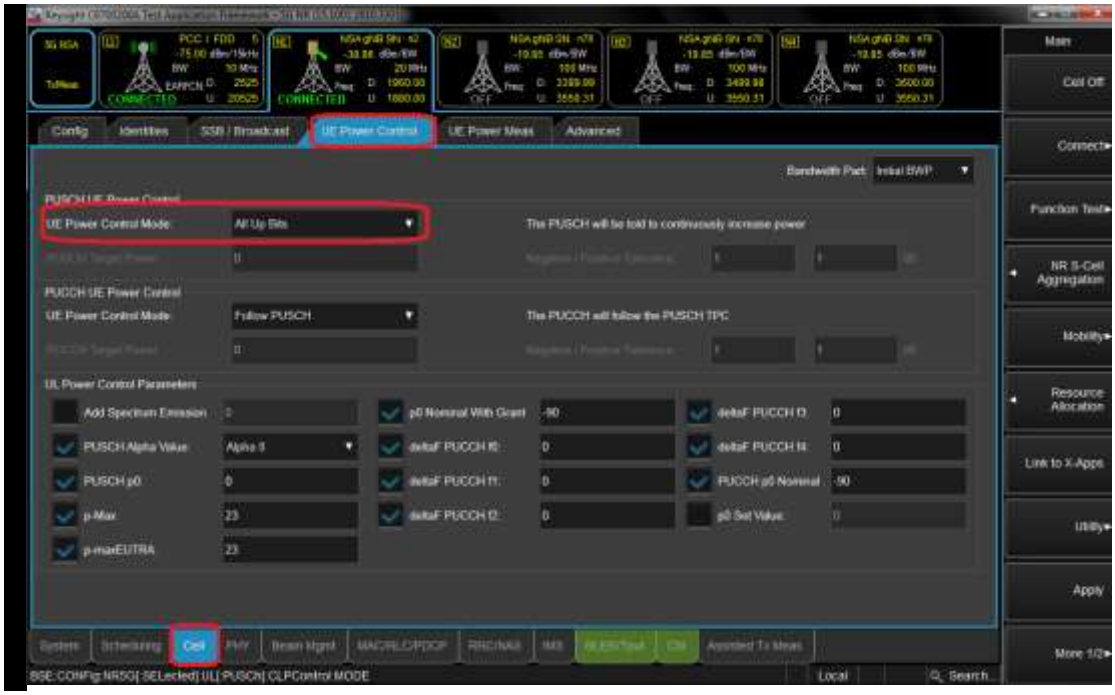


Connect NR S-Cell Aggregation

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

Max Power setting

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



Selecting Start RB/Count/MCS

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

View Tx Power

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