Appendix H. – Power reduction verification

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

The verification process was divided into two parts:

1). Evaluation of output power levels for individual triggering mechanism

2) Evaluation of the triggering distances for proximity-based sensors.

1. Power Reduction Verification for —Main#1,Main#2 Ant

The Power verification was performed according to the following procedure:

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

Main Antenna Verification Summary

Mechanism(s)	Mode/Band	Power reduction Mechanism		
		Un-triggered (Max Power)	Triggered (Reduced Power)	Triggered (Reduced Power)
Grip	GSM 850 GPRS 1Tx	31.54	30.97	
Grip	GSM 850 GPRS 2Tx	30.40	28.07	
Grip	GSM 850 GPRS 3Tx	28.65	25.75	
Grip	GSM 850 GPRS 4Tx	26.45	24.92	
Grip	GSM 1900 GPRS 1Tx	30.71	27.54	
Grip	GSM 1900 GPRS 2Tx	28.68	25.43	
Grip	GSM 1900 GPRS 3Tx	26.14	23.83	
Grip	GSM 1900 GPRS 4Tx	24.56	21.75	
Grip	UMTS B2	23.38	21.39	
Grip	UMTS B4	23.54	21.56	
Grip	LTE Band 2	24.05	21.09	
Grip	LTE Band 4	24.12	21.35	
Grip	LTE Band 7	23.42	20.78	
Grip	LTE Band 25	24.07	21.24	
Grip	LTE Band 30	22.86	21.11	
Grip	LTE Band 66	24.17	21.46	
Grip	NR Band n2	23.99	21.49	
Grip	NR Band n25	23.96	21.37	
Grip	NR Band n30	23.25	21.42	
Grip	NR Band n66	24.50	21.54	
Hotspot On	GSM 850 GPRS 1Tx	31.54	30.98	
Hotspot On	GSM 850 GPRS 2Tx	30.40	28.02	
Hotspot On	GSM 850 GPRS 3Tx	28.65	25.82	
Hotspot On	GSM 850 GPRS 4Tx	26.45	25.01	
Hotspot On	GSM 1900 GPRS 1Tx	30.71	27.54	
Hotspot On	GSM 1900 GPRS 2Tx	28.68	25.44	
Hotspot On	GSM 1900 GPRS 3Tx	26.14	23.82	
Hotspot On	GSM 1900 GPRS 4Tx	24.56	21.74	
Hotspot On	UMTS B2	23.38	21.40	
Hotspot On	UMTS B4	23.54	21.55	
Hotspot On	LTE Band 2	24.05	21.18	
Hotspot On	LTE Band 4	24.12	21.40	
Hotspot On	LTE Band 7	23.42	20.89	
Hotspot On	LTE Band 25	24.07	21.26	
Hotspot On	LTE Band 30	22.86	21.28	
Hotspot On	LTE Band 66	24.17	21.45	
Hotspot On	NR Band n2	23.99	21.43	
Hotspot On	NR Band n25	23.96	21.40	
Hotspot On	NR Band n30	23.25	21.21	
Hotspot On	NR Band n66	24.50	21.60	
Hotspot On, Then Grip	GSM 850 GPRS 1Tx	31.54	30.98	30.98
Hotspot On, Then Grip	GSM 850 GPRS 2Tx	30.40	28.02	28.02
Hotspot On, Then Grip	GSM 850 GPRS 3Tx	28.65	25.82	25.82
Hotspot On, Then Grip	GSM 850 GPRS 4Tx	26.45	25.01	25.01
Hotspot On, Then Grip	GSM 1900 GPRS 1Tx	30.71	27.54	27.54
Hotspot On, Then Grip	GSM 1900 GPRS 2Tx	28.68	25.44	25.44
Hotspot On, Then Grip	GSM 1900 GPRS 3Tx	26.14	23.82	23.82
Hotspot On, Then Grip	GSM 1900 GPRS 4Tx	24.56	21.74	21.74
Hotspot On, Then Grip	UMTS B2	23.38	21.40	21.40

Hotspot On, Then Grip	UMTS B4	23.54	21.55	21.55
Hotspot On, Then Grip	LTE Band 2	24.05	21.18	21.18
Hotspot On, Then Grip	LTE Band 4	24.12	21.40	21.40
Hotspot On, Then Grip	LTE Band 7	23.42	20.89	20.89
Hotspot On, Then Grip	LTE Band 25	24.07	21.26	21.26
Hotspot On, Then Grip	LTE Band 30	22.86	21.28	21.28
Hotspot On, Then Grip	LTE Band 66	24.17	21.45	21.45
Hotspot On, Then Grip	NR Band n2	23.99	21.43	21.43
Hotspot On, Then Grip	NR Band n25	23.96	21.40	21.40
Hotspot On, Then Grip	NR Band n30	23.25	21.21	21.21
Hotspot On, Then Grip	NR Band n66	24.50	21.60	21.60
Grip, then Hotspot On	GSM 850 GPRS 1Tx	31.54	30.97	30.98
Grip, then Hotspot On	GSM 850 GPRS 2Tx	30.40	28.07	28.02
Grip, then Hotspot On	GSM 850 GPRS 3Tx	28.65	25.75	25.82
Grip, then Hotspot On	GSM 850 GPRS 4Tx	26.45	24.92	25.01
Grip, then Hotspot On	GSM 1900 GPRS 1Tx	30.71	27.54	27.54
Grip, then Hotspot On	GSM 1900 GPRS 2Tx	28.68	25.43	25.44
Grip, then Hotspot On	GSM 1900 GPRS 3Tx	26.14	23.83	23.82
Grip, then Hotspot On	GSM 1900 GPRS 4Tx	24.56	21.75	21.74
Grip, then Hotspot On	UMTS B2	23.38	21.39	21.40
Grip, then Hotspot On	UMTS B4	23.54	21.56	21.55
Grip, then Hotspot On	LTE Band 2	24.05	21.09	21.18
Grip, then Hotspot On	LTE Band 4	24.12	21.35	21.40
Grip, then Hotspot On	LTE Band 7	23.42	20.78	20.89
Grip, then Hotspot On	LTE Band 25	24.07	21.24	21.26
Grip, then Hotspot On	LTE Band 30	22.86	21.11	21.28
Grip, then Hotspot On	LTE Band 66	24.17	21.46	21.45
Grip, then Hotspot On	NR Band n2	23.99	21.49	21.43
Grip, then Hotspot On	NR Band n25	23.96	21.37	21.40
Grip, then Hotspot On	NR Band n30	23.25	21.42	21.21
Grip, then Hotspot On	NR Band n66	24.50	21.54	21.60

1.1. Distance Verification Procedure

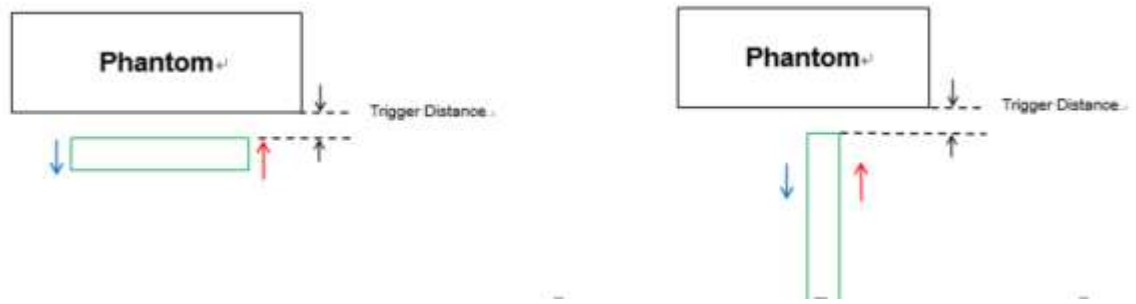
Procedures for determining proximity sensor triggering distances

(KDB 616217D04v01r02§6.2)

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

1. A base station simulator was used to establish an RF connection and to monitor the power levels. The device being tested was placed below the relevant section of the phantom with the relevant side or edge of the device facing toward the phantom.
2. The device was moved toward and away from the phantom to determine the distance at which the mechanism triggers and the output power is reduced per KDB Publication 616217 D04v01r02 .Each applicable test position was evaluated. The distance were conformed to be the same or larger (more conservative) than the minimum distances provided by the manufacturer.
3. Step 1 and 2 were repeated for the relevant modes, as appropriate
4. Steps1 through 3 were repeated for all distance-based power reduction mechanisms.

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



Proximity Sensor Trigger Distance Assessment KDB 616217 D04§6.2

LEGEND

→ Direction of DUT travel for determination of power reduction triggering point

→ Direction of DUT travel for determination of full power resumption triggering point

Main Ant#2

Tissue simulating liquid	Triggering Distance			
	Rear		Bottom	
	Moving toward phantom [mm]	Moving away from phantom [mm]	Moving toward phantom [mm]	Moving away from phantom [mm]
850MHz Tissue	20	21	14	15
1800MHz Tissue	20	21	14	15
1900MHz Tissue	20	21	14	15

Distance Measurement verification for Proximity sensor

Rear side(Main Ant#1,2) – EUT Moving toward (trigger) to the Phantom

Mode	Distance to DUT Output power (dBm)									
	25[mm]	24[mm]	23[mm]	22[mm]	21[mm]	20[mm]	19[mm]	18[mm]	17[mm]	16[mm]
GSM 850 GPRS 1Tx	31.64	31.51	31.52	31.53	31.58	30.81	30.90	30.95	30.77	30.88
GSM 850 GPRS 2Tx	30.30	30.46	30.36	30.46	30.34	28.14	28.06	28.08	28.04	28.15
GSM 850 GPRS 3Tx	28.67	28.70	28.69	28.65	28.64	25.84	25.74	25.76	25.65	25.77
GSM 850 GPRS 4Tx	26.54	26.44	26.55	26.44	26.55	24.98	24.85	24.89	24.96	24.96
GSM 1900 GPRS 1Tx	30.62	30.71	30.66	30.64	30.69	27.46	27.5	27.53	27.53	27.48
GSM 1900 GPRS 2Tx	28.66	28.62	28.66	28.64	28.61	25.35	25.34	25.52	25.52	25.52
GSM 1900 GPRS 3Tx	26.12	26.04	26.16	26.18	26.23	23.82	23.86	23.73	23.74	23.92
GSM 1900 GPRS 4Tx	24.54	24.63	24.64	24.66	24.64	21.77	21.72	21.82	21.66	21.81
UMTS B2	23.34	23.31	23.36	23.28	23.28	21.49	21.48	21.49	21.32	21.36
UMTS B4	23.46	23.54	23.49	23.53	23.49	21.55	21.49	21.56	21.53	21.47
LTE Band 2	24.04	24.05	24.01	24.02	23.95	21.04	21.08	21.09	21.05	21.12
LTE Band 4	24.09	24.09	24.05	24.07	24.02	21.36	21.37	21.33	21.28	21.26
LTE Band 7	23.42	23.39	23.42	23.32	23.34	20.87	20.79	20.68	20.82	20.81
LTE Band 25	23.89	24.06	23.98	24.04	23.87	21.27	21.23	21.24	21.24	21.14
LTE Band 30	23.26	23.27	23.29	23.27	23.21	21.16	21.21	21.04	21.08	21.19
LTE Band 66	22.37	22.46	22.51	22.49	22.51	21.41	21.51	21.43	21.38	21.52
NR Band 2	23.89	23.97	24.02	23.96	23.95	21.59	21.42	21.52	21.59	21.58
NR Band 25	23.27	23.19	23.16	23.29	23.23	21.47	21.28	21.27	21.47	21.38
NR Band 30	22.51	22.49	22.54	22.54	22.54	21.32	21.49	21.37	21.40	21.36
NR Band 66	24.39	24.44	24.41	24.52	24.57	21.51	21.44	21.43	21.39	21.46

Rear side(Main Ant#2) – EUT Moving away (Release) from the Phantom

Mode	Distance to DUT Output power (dBm)									
	17[mm]	18[mm]	19[mm]	20[mm]	21[mm]	22[mm]	23[mm]	24[mm]	25[mm]	26[mm]
GSM 850 GPRS 1Tx	30.85	30.97	30.95	30.84	30.77	31.63	31.60	31.62	31.64	31.52
GSM 850 GPRS 2Tx	28.01	28.15	28.14	28.01	28.00	30.30	30.40	30.49	30.45	30.42
GSM 850 GPRS 3Tx	25.69	25.78	25.78	25.80	25.84	28.67	28.73	28.71	28.55	28.61
GSM 850 GPRS 4Tx	24.83	25.00	24.89	24.83	24.93	26.37	26.51	26.45	26.39	26.45
GSM 1900 GPRS 1Tx	27.5	27.47	27.49	27.49	27.53	30.63	30.74	30.74	30.61	30.64
GSM 1900 GPRS 2Tx	25.36	25.29	25.54	25.62	25.57	28.65	28.64	28.64	28.69	28.66
GSM 1900 GPRS 3Tx	23.9	23.89	23.71	23.77	23.91	26.08	26.03	26.23	26.13	26.21
GSM 1900 GPRS 4Tx	21.83	21.71	21.82	21.67	21.84	24.53	24.62	24.6	24.73	24.63
UMTS B2	21.51	21.47	21.47	21.31	21.34	23.35	23.27	23.38	23.31	23.32
UMTS B4	21.59	21.52	21.56	21.48	21.44	23.42	23.56	23.51	23.53	23.57
LTE Band 2	21.06	21.13	21.08	21.1	21.14	24.07	24.04	24.04	23.99	23.9
LTE Band 4	21.36	21.39	21.36	21.28	21.32	24.15	24.13	24.01	24.13	24.02
LTE Band 7	20.88	20.87	20.64	20.89	20.89	23.41	23.46	23.37	23.39	23.36
LTE Band 25	21.22	21.18	21.21	21.23	21.18	23.96	24.03	23.94	24.13	23.89
LTE Band 30	21.19	21.18	21.05	21.09	21.16	23.33	23.31	23.37	23.24	23.18
LTE Band 66	21.41	21.51	21.39	21.35	21.56	22.34	22.54	22.51	22.52	22.47
NR Band 2	21.64	21.45	21.47	21.55	21.56	23.92	23.95	24.10	24.01	24.03
NR Band 25	21.43	21.24	21.30	21.48	21.46	23.28	23.24	23.15	23.31	23.26
NR Band 30	21.37	21.52	21.36	21.44	21.34	22.54	22.52	22.60	22.62	22.49
NR Band 66	21.48	21.44	21.43	21.34	21.45	24.36	24.46	24.45	24.56	24.61

Based on the most conservative measured triggering distance of 12mm, additional Phablet SAR measurements were required at 11mm from rear side for the above modes.

Bottom side(Main Ant#2) – EUT Moving toward (trigger) to the Phantom

Mode	Distance to DUT Output power (dBm)									
	19[mm]	18[mm]	17[mm]	16[mm]	15[mm]	14[mm]	13[mm]	12[mm]	11[mm]	10[mm]
GSM 850 GPRS 1Tx	31.54	31.53	31.60	31.59	31.45	30.79	30.89	30.95	30.95	30.86
GSM 850 GPRS 2Tx	30.48	30.42	30.39	30.43	30.50	28.04	28.06	28.06	28.12	28.07
GSM 850 GPRS 3Tx	28.66	28.65	28.61	28.62	28.58	25.85	25.84	25.80	25.82	25.82
GSM 850 GPRS 4Tx	26.41	26.44	26.50	26.51	26.50	24.90	24.94	24.84	24.94	24.84
GSM 1900 GPRS 1Tx	30.56	30.7	30.64	30.64	30.67	27.42	27.43	27.45	27.53	27.48
GSM 1900 GPRS 2Tx	28.66	28.52	28.56	28.56	28.61	25.31	25.31	25.52	25.52	25.51
GSM 1900 GPRS 3Tx	26.12	25.99	26.15	26.17	26.21	23.76	23.86	23.63	23.66	23.87
GSM 1900 GPRS 4Tx	24.48	24.63	24.54	24.57	24.56	21.74	21.67	21.79	21.58	21.81
UMTS B2	23.26	23.2	23.31	23.25	23.23	21.43	21.43	21.48	21.31	21.32
UMTS B4	23.42	23.51	23.41	23.46	23.44	21.48	21.41	21.52	21.43	21.37
LTE Band 2	23.97	24.03	23.92	23.95	23.92	20.99	21.02	20.99	21.02	21.11
LTE Band 4	24.07	24.06	24.02	24.05	24.02	21.33	21.35	21.31	21.24	21.24
LTE Band 7	23.35	23.31	23.41	23.22	23.27	20.82	20.78	20.58	20.78	20.72
LTE Band 25	23.86	24.04	23.98	23.94	23.77	21.27	21.14	21.15	21.22	21.05
LTE Band 30	23.21	23.20	23.25	23.24	23.17	21.08	21.16	21.04	21.06	21.14
LTE Band 66	22.35	22.41	22.42	22.45	22.51	21.39	21.44	21.33	21.33	21.47
NR Band 2	23.87	23.95	23.94	23.87	23.93	21.59	21.34	21.48	21.51	21.56
NR Band 25	23.19	23.12	23.08	23.21	23.2	21.44	21.21	21.17	21.44	21.34
NR Band 30	22.43	22.41	22.51	22.47	22.53	21.26	21.4	21.35	21.35	21.33
NR Band 66	24.31	24.36	24.32	24.52	24.57	21.49	21.41	21.35	21.33	21.36

Bottom side(Main Ant#2) – EUT Moving away (Release) from the Phantom

Mode	Distance to DUT Output power (dBm)									
	11[mm]	12[mm]	13[mm]	14[mm]	15[mm]	16[mm]	17[mm]	18[mm]	19[mm]	20[mm]
GSM 850 GPRS 1Tx	30.91	30.93	30.95	30.83	30.79	31.52	31.54	31.59	31.57	31.58
GSM 850 GPRS 2Tx	28.14	28.10	28.10	28.09	27.99	30.30	30.31	30.49	30.32	30.43
GSM 850 GPRS 3Tx	25.68	25.68	25.73	25.80	25.76	28.55	28.55	28.66	28.55	28.66
GSM 850 GPRS 4Tx	25.01	24.90	24.91	25.01	24.91	26.36	26.42	26.39	26.40	26.43
GSM 1900 GPRS 1Tx	27.49	27.37	27.39	27.48	27.43	30.54	30.73	30.74	30.54	30.63
GSM 1900 GPRS 2Tx	25.35	25.22	25.44	25.56	25.56	28.63	28.64	28.59	28.62	28.66
GSM 1900 GPRS 3Tx	23.89	23.82	23.63	23.68	23.85	26.07	25.96	26.13	26.11	26.15
GSM 1900 GPRS 4Tx	21.83	21.70	21.78	21.62	21.75	24.47	24.58	24.54	24.69	24.62
UMTS B2	21.48	21.47	21.44	21.24	21.31	23.26	23.27	23.38	23.26	23.27
UMTS B4	21.57	21.49	21.55	21.44	21.34	23.35	23.56	23.43	23.45	23.5
LTE Band 2	21.03	21.06	21.02	21.08	21.06	24.07	24.04	24.04	23.94	23.86
LTE Band 4	21.36	21.32	21.35	21.24	21.28	24.12	24.09	23.95	24.11	24.01
LTE Band 7	20.78	20.83	20.61	20.87	20.79	23.41	23.46	23.36	23.30	23.35
LTE Band 25	21.14	21.17	21.14	21.21	21.15	23.93	23.98	23.91	24.04	23.83
LTE Band 30	21.12	21.13	21.06	20.99	21.09	23.28	23.29	23.28	23.19	23.11
LTE Band 66	21.39	21.48	21.36	21.35	21.52	22.33	22.47	22.48	22.52	22.44
NR Band 2	21.63	21.39	21.46	21.52	21.51	23.82	23.89	24.03	23.92	23.94
NR Band 25	21.34	21.25	21.31	21.40	21.42	23.28	23.18	23.06	23.29	23.23
NR Band 30	21.33	21.48	21.28	21.41	21.25	22.45	22.52	22.58	22.53	22.39
NR Band 66	21.39	21.41	21.36	21.32	21.43	24.26	24.39	24.36	24.52	24.55

Based on the most conservative measured triggering distance of 10mm, additional Phablet SAR measurements were required at 9mm from bottom side for the above modes

1.2 Proximity Sensor Coverage for SAR measurements

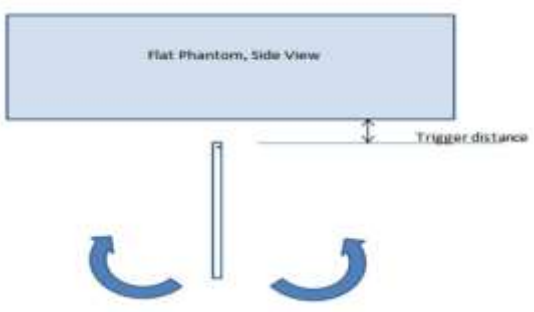
(KDB 616217 D04v01r02§6.3)

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

1.3 Proximity Sensor Tilt Angle Assessment

(KDB 616217 D04v01r02 §6.4)

The DUT was positioned directly below the flat phantom at the minimum measured trigger distance with Bottom, Left side parallel to the base of the flat phantom for each band. The EUT was rotated about Bottom, Left 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, Left side) KDB 616217 §6.4

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

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

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

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

1.4 Resulting test positions for Phablet SAR measurements

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Phablet SAR [mm]
WWAN GSM850/GSM1900/ UMTS B2/B4/ LTE B2/B4/B7/B25/B30/B66/ NR n2/NR n25/NR n30/NR n66	Rear	20	N/A	N/A	19
	Bottom	14	N/A	N/A	13

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

2. Power reduction Verification of Antenna Sub Ant#1 for RCV-ON

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

When a user makes or receives a voice call for Sub Ant#1 the audio of the call is sent through the Receiver at the top of the device will trigger the Power reduction for Sub Ant#1 (i.e. reducing output power for Head SAR compliance)

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

Sub Ant#1

Condition For Power reduction	Wireless Technologies	Power reduction Mechanism	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV on	LTE Band 2	21.22	19.01
RCV on	LTE Band 4	21.59	19.37
RCV on	LTE Band 25	21.21	19.03
RCV on	LTE Band 66	21.69	19.10

Main Ant#2

Condition For Power reduction	Wireless Technologies	Power reduction Mechanism	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV on	LTE Band 2	24.05	22.62
RCV on	LTE Band 4	24.12	23.33
RCV on	LTE Band 25	24.07	23.03
RCV on	LTE Band 66	24.17	23.39

3. Power reduction Verification for WLAN Sub#2 Ant

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

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

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

Power Measurement Verification

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV on	2.4GHz 802.11b	16.52	12.02
RCV on	2.4GHz 802.11g	16.37	11.33
RCV on	2.4GHz 802.11n 20MHz	16.51	10.97
RCV on	2.4GHz 802.11ax 20MHz	15.89	11.36
RCV on	5GHz 802.11a	16.95	10.42
RCV on	5GHz 802.11n 20MHz	16.99	9.86
RCV on	5GHz 802.11n 40MHz	14.99	10.19
RCV on	5GHz 802.11ac 20MHz	15.86	9.86
RCV on	5GHz 802.11ac 40MHz	14.99	9.66
RCV on	5GHz 802.11ac 80MHz	11.31	10.52
RCV on	5GHz 802.11ac 160MHz	11.04	10.34
RCV on	5GHz 802.11ax 20MHz	14.97	10.14
RCV on	5GHz 802.11ax 40MHz	14.96	9.90
RCV on	5GHz 802.11ax 80MHz	11.50	10.19
RCV on	5GHz 802.11ax 160MHz	10.91	10.05

4. Power reduction Verification for WLAN Sub#3 Ant

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

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

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

Power Measurement Verification

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV on	5GHz 802.11a	16.16	10.96
RCV on	5GHz 802.11n 20MHz	16.27	10.28
RCV on	5GHz 802.11n 40MHz	14.99	10.84
RCV on	5GHz 802.11ac 20MHz	15.72	10.18
RCV on	5GHz 802.11ac 40MHz	14.99	10.53
RCV on	5GHz 802.11ac 80MHz	12.28	10.99
RCV on	5GHz 802.11ac 160MHz	11.78	10.34
RCV on	5GHz 802.11ax 20MHz	15.30	10.77
RCV on	5GHz 802.11ax 40MHz	15.43	10.49
RCV on	5GHz 802.11ax 80MHz	12.47	10.78
RCV on	5GHz 802.11ax 160MHz	11.78	10.20

5. Power reduction Verification for WLAN Sub#4 Ant

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

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

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

Power Measurement Verification

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV on	2.4GHz 802.11b	16.24	11.48
RCV on	2.4GHz 802.11g	15.43	10.85
RCV on	2.4GHz 802.11n 20MHz	15.48	10.47
RCV on	2.4GHz 802.11ax 20MHz	15.01	10.35

6. Power reduction Verification for WLAN Sub#2, #4 Ant

This device uses a power reduction mechanism for SAR compliance for 2.4GHz WLAN operations during Hotspot operation.

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

Power Measurement Verification

Condition For Power reduction	Wireless Technologies	Ant. Config.	Conducted Power[dBm]	
			Un-Triggered (Max Power)	Triggered (Reduced Power)
Hotspot on	2.4GHz 802.11b	Ant.1	16.52	9.58
Hotspot on	2.4GHz 802.11g	Ant.1	16.37	9.68
Hotspot on	2.4GHz 802.11n 20MHz	Ant.1	16.51	9.38
Hotspot on	2.4GHz 802.11ax 20MHz	Ant.1	15.89	10.11
Hotspot on	2.4GHz 802.11b	Ant.2	16.24	9.60
Hotspot on	2.4GHz 802.11g	Ant.2	15.43	9.78
Hotspot on	2.4GHz 802.11n 20MHz	Ant.2	15.48	9.49
Hotspot on	2.4GHz 802.11ax 20MHz	Ant.2	15.01	10.19

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.

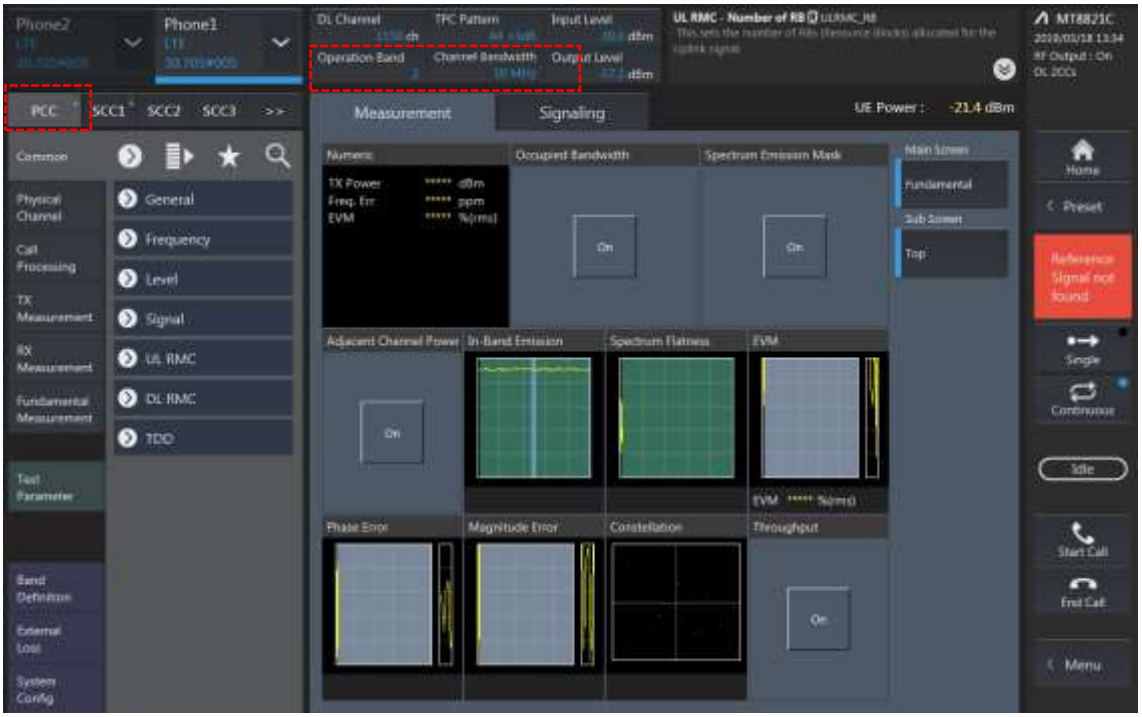
Downlink Carrier aggregation:

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.

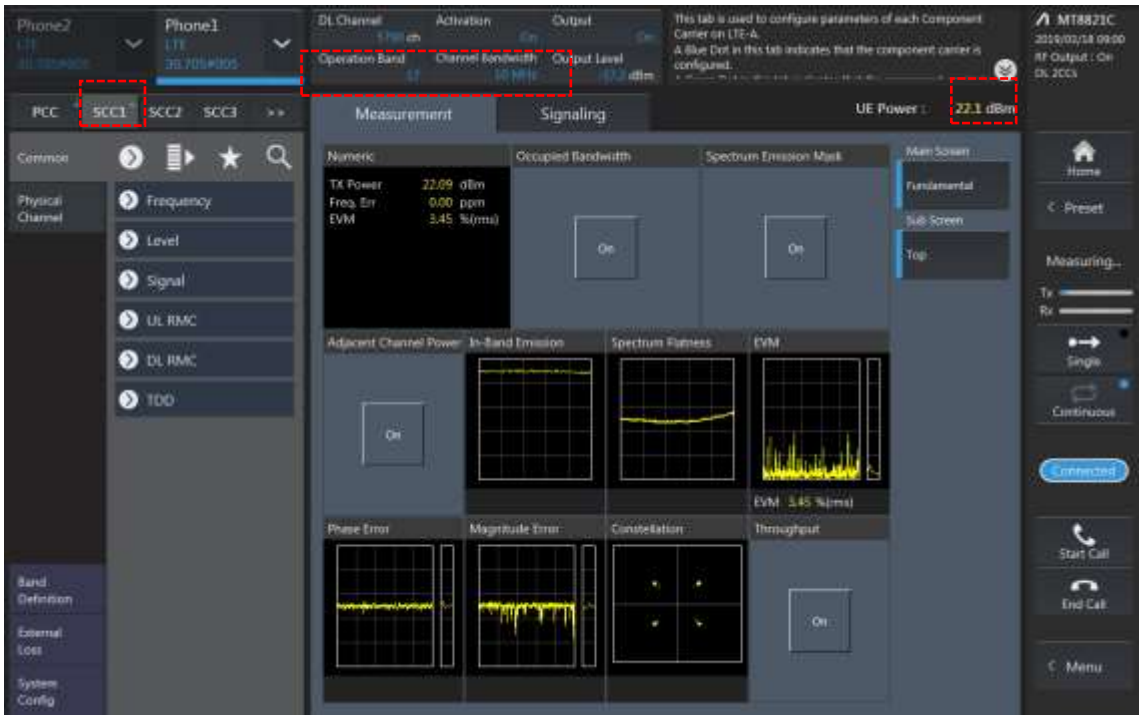
Power Measurement setup

LTE Down Link 2CA Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



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

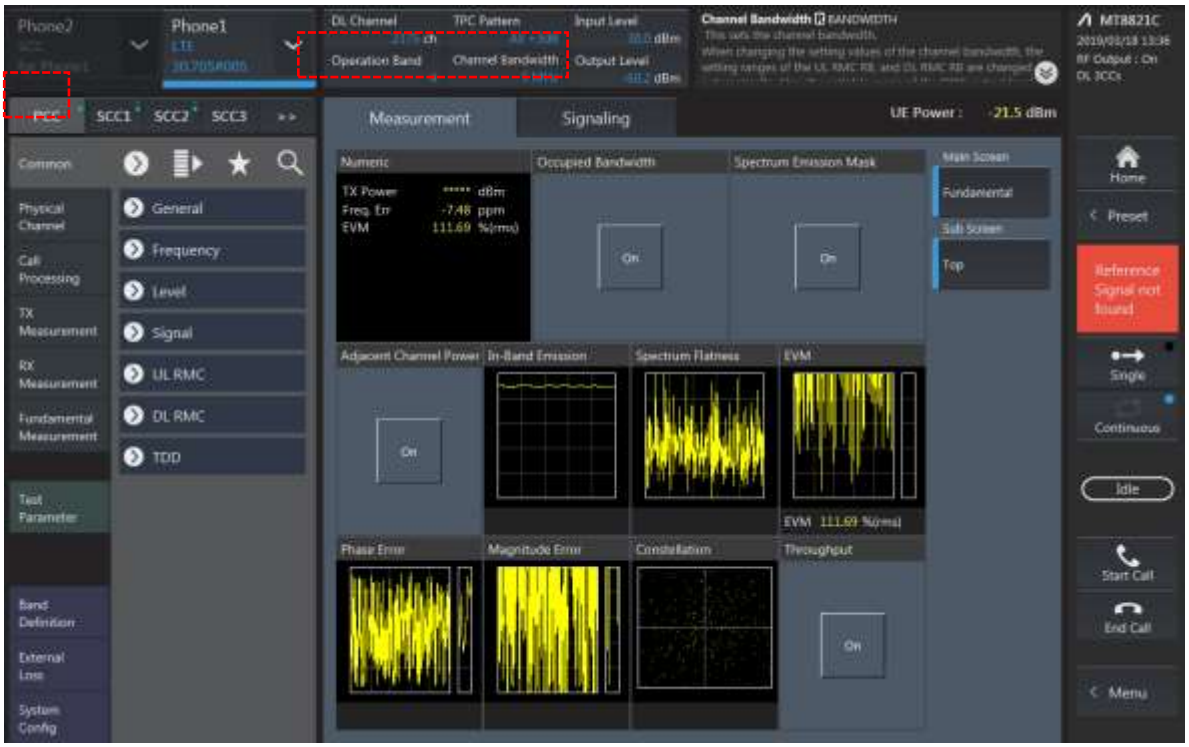


2CA Downlink Carrier aggregation Maximum conducted Powers

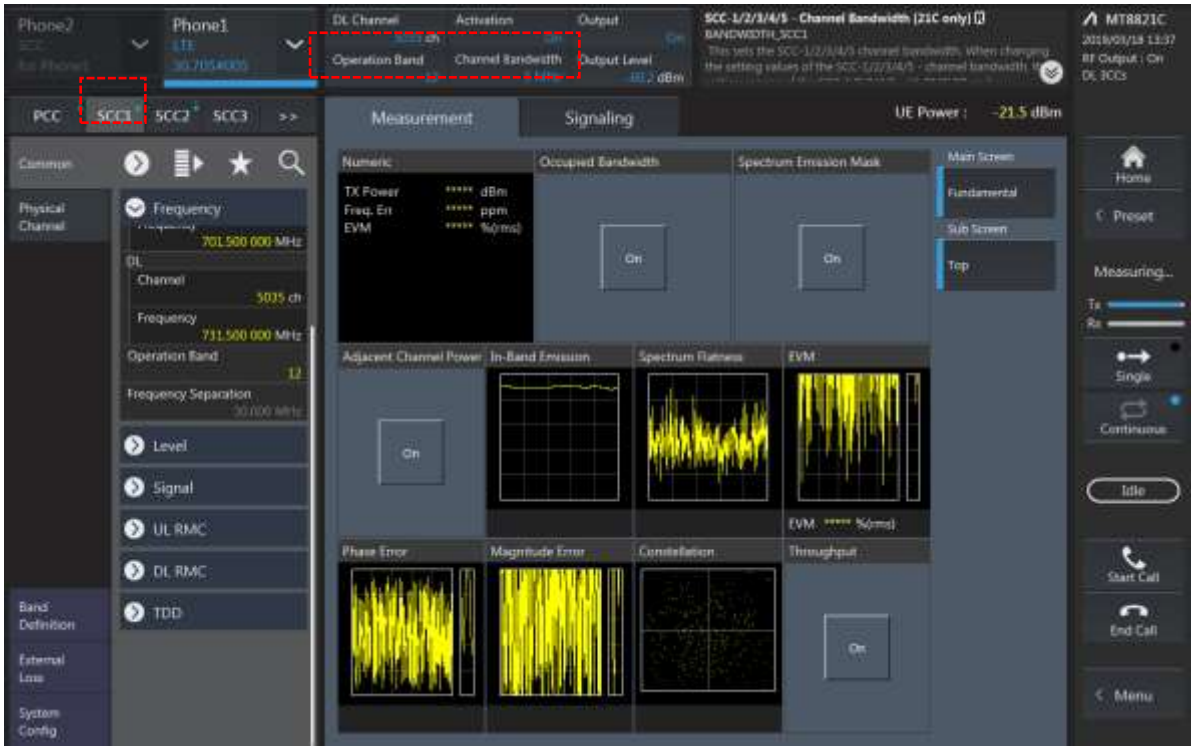
Combination	PCC									SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	Deviation
4A-48A (48A SCC only)	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55340	3560	24.43	24.53	-0.10
5A-25A (ACG carrier only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	25	20	8365	1962.5	24.12	24.18	-0.06
5A-25A (ACG carrier only)	25	20	26365	1882.5	8365	1962.5	QPSK	1	12	5	10	2625	891.5	24.14	24.18	-0.04
5A-30A	5	5	20625	846.5	2625	891.5	QPSK	1	12	30	10	9820	2355	24.12	24.22	-0.10
5A-30A	30	5	27685	2307.5	9795	2352.5	QPSK	1	12	5	10	2625	891.5	23	22.94	0.06
12A-25A (ACG carrier only)	12	5	23155	713.5	5155	743.5	QPSK	1	12	25	20	8365	1962.5	24.24	24.32	-0.08
12A-25A (ACG carrier only)	25	20	26365	1882.5	8365	1962.5	QPSK	1	12	12	10	5155	743.5	24.14	24.17	-0.03
12A-30A	12	5	23155	713.5	5155	743.5	QPSK	1	12	30	10	9820	2355	24.24	24.22	0.02
12A-30A	30	5	27685	2307.5	9795	2352.5	QPSK	1	12	12	10	5155	743.5	23	22.96	0.04
12A-46A (46A SCC only)	12	5	23155	713.5	5155	743.5	QPSK	1	12	46	20	46890	5160	24.24	24.27	-0.03
12A-48A (48A SCC only)	12	5	23155	713.5	5155	743.5	QPSK	1	12	48	20	55340	3560	24.24	24.34	-0.10
14A-30A	14	10	23330	793	5330	763	QPSK	1	24	30	10	9820	2355	24.55	24.61	-0.06
14A-30A	30	5	27685	2307.5	9795	2352.5	QPSK	1	12	14	10	5330	763	23	23.07	-0.07
25A-25A (0)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8090	1935	24.14	24.11	0.03
25A-25A (1)	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	20	8115	1937.5	24.14	24.15	-0.01
29A-30A (29A SCC only)	30	5	27685	2307.5	9795	2352.5	QPSK	1	12	29	10	9720	723	23	22.91	0.09

LTE Down Link 3CA Call Setup

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



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



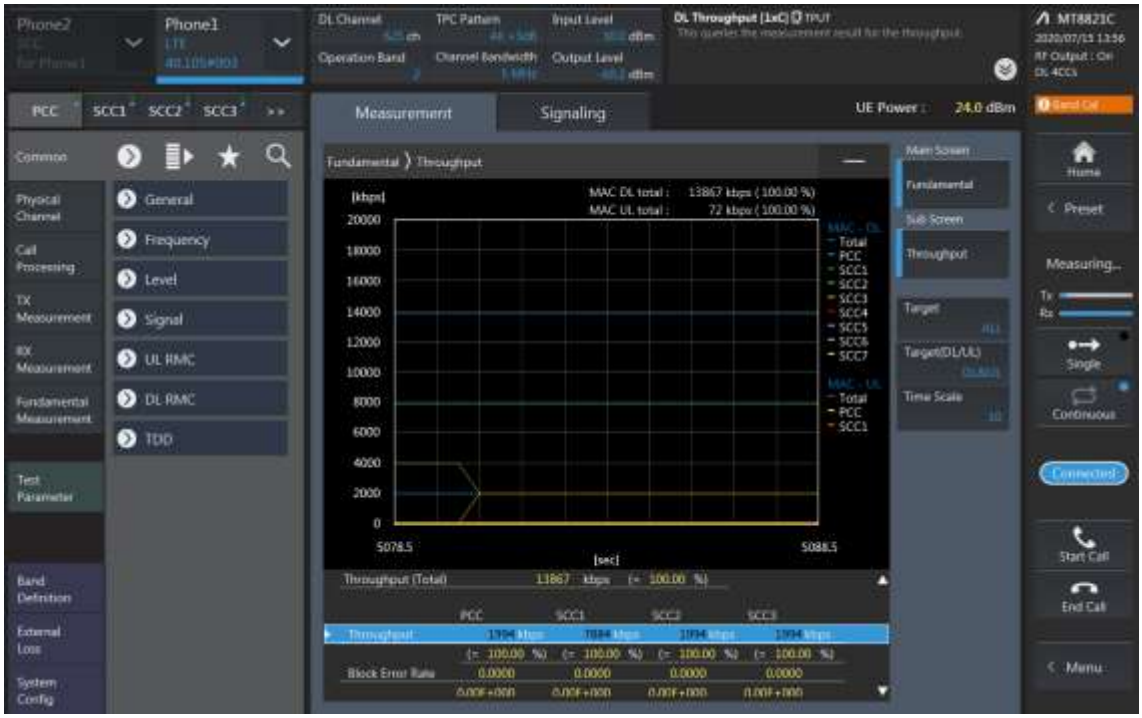
3) SCC2 Setting (Channel /RB/BW/Modulation)and call Connection

3CA Downlink Carrier aggregation Maximum conducted Powers

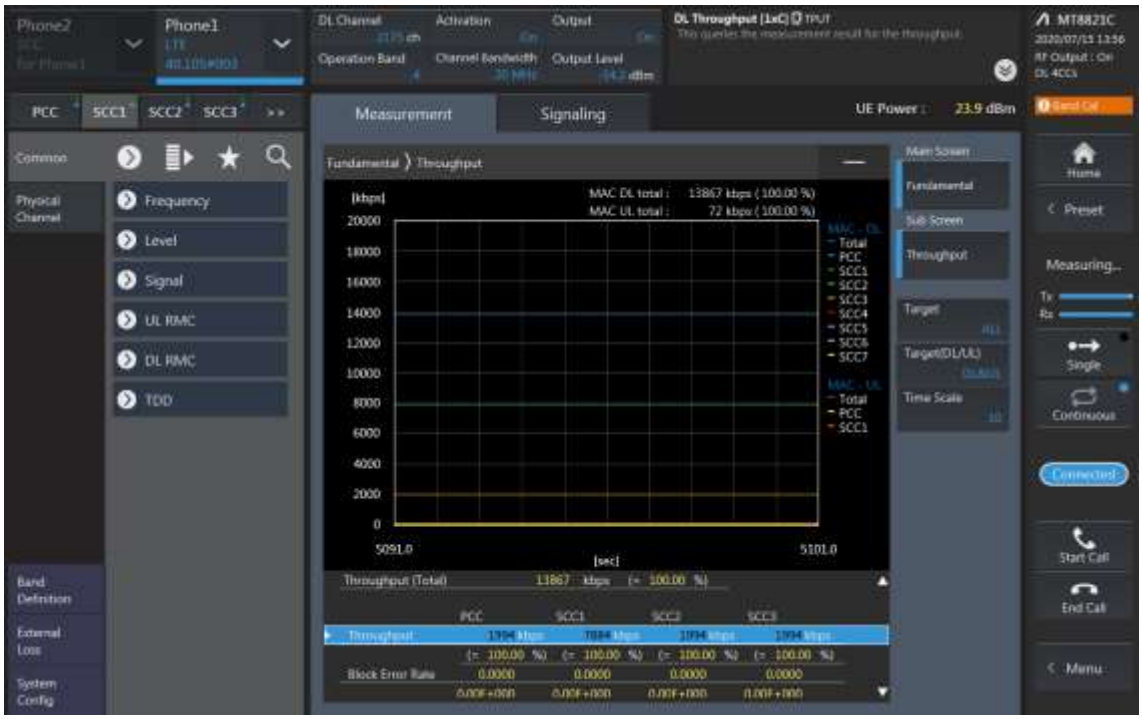
Combination	PCC									SCC				SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)	Deviation
2A-2A-29A (29A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	29	10	9720	723	24.05	24.12	-0.07
2A-2A-46A (46A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	46	20	46890	5160	24.05	23.96	0.09
2A-2A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	71	10	68761	634.5	24.05	24.04	0.01
2A-2A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	24.33	24.29	0.04
2A-4A-13A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	24.05	24.01	0.04
2A-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	13	10	5230	751	2	20	900	1960	24.43	24.36	0.07
2A-4A-13A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.11	24.15	-0.04
2A-5A-46A (46A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	46	20	46890	5160	24.05	24.04	0.01
2A-5A-46A (46A SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	700	1940	46	20	46890	5160	24.12	24.15	-0.03
2A-5A-48A (48A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	48	20	55340	3560	24.05	24.03	0.02
2A-5A-48A (48A SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2525	881.5	48	20	55340	3560	24.12	24.22	-0.10
2A-13A-46A (46A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	46	20	46890	5160	24.05	23.95	0.10
2A-13A-46A (46A SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	700	1940	46	20	46890	5160	24.11	24.09	0.02
2A-13A-48A (48A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	48	20	55340	3560	24.05	23.98	0.07
2A-13A-48A (48A SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	700	1940	48	20	55340	3560	24.11	24.08	0.03
2A-29A-66A (29A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	29	10	9720	723	66	20	66786	2145	24.05	24.01	0.04
2A-29A-66A (29A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	700	1940	29	10	9720	723	24.47	24.40	0.07
2A-46A-46A (46A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	46	20	54340	5905	24.05	23.95	0.10
A-46A-48A (46A 48A SCC onl	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	48	20	55340	3560	24.05	24.12	-0.07
A-46A-48A (46A 48A SCC onl	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	2	20	700	1940	46	20	54340	5905	24.47	24.51	-0.04
2A-48A-48A (48A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	56640	3690	24.05	24.07	-0.02
2A-48A-66A (48A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	66	20	66786	2145	24.05	24.14	-0.09
2A-48A-66A (48A SCC only)	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	2	20	700	1940	66	20	66786	2145	24.47	24.42	0.05
4A-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	13	10	5205	748.5	24.43	24.53	-0.10
4A-4A-13A	13	5	23205	779.5	5205	748.5	QPSK	1	12	4	20	2050	2120	4	20	2300	2145	24.11	24.21	-0.10
4A-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	71	20	68761	634.5	24.43	24.43	0.00
4A-4A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	4	20	2175	2132.5	4	20	2300	2145	24.33	24.34	-0.01
4A-46A-46A (46A SCC only)	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	46890	5160	46	20	54340	5905	24.43	24.52	-0.09
4A-46C (46C SCC only)	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	54142	5885.2	46	20	54340	5905	24.43	24.51	-0.08
4A-48C (48C SCC only)	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55340	3560	48	20	55538	3579.8	24.43	24.38	0.05
5A-46A-66A (46A SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	46890	5160	66	20	66786	2145	24.12	24.07	0.05
5A-46A-66A (46A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	46	20	54340	5905	24.47	24.49	-0.02
5B-30A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2697	898.7	30	10	9820	2355	24.12	24.04	0.08
5B-30A	30	5	27685	2307.5	9795	2352.5	QPSK	1	12	5	10	2525	881.5	5	10	2624	891.4	23	22.99	0.01
5B-46A (46A SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2697	898.7	46	20	46890	5160	24.12	24.11	0.01
12A-46C (46C SCC only)	12	5	23155	713.5	5155	743.5	QPSK	1	12	46	20	46890	5160	46	20	54340	5905	24.24	24.22	0.02
12A-48C (48C SCC only)	12	5	23155	713.5	5155	743.5	QPSK	1	12	48	20	55340	3560	48	20	55538	3579.8	24.24	24.34	-0.10
13A-46A-66A (46A SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	46	20	46890	5160	66	20	66786	2145	24.11	24.13	-0.02
13A-46A-66A (46A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	46	20	54340	5905	24.47	24.56	-0.09
13A-48A-48A (48A SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	48	20	56640	3690	24.11	24.12	-0.01
13A-48A-66A (48A SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	24.11	24.06	0.05
13A-48A-66A (48A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	48	20	56640	3690	24.47	24.43	0.04
29A-66A-66A (29A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	29	10	9720	723	66	20	66786	2145	24.47	24.43	0.04
46A-46A-66A (46A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	46	20	54340	5905	24.47	24.48	-0.01
5A-48A-66A (46A 48A SCC onl	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	48	20	56640	3690	24.47	24.45	0.02
48A-48A-71A (48A SCC only)	71	5	133147	666.5	68621	620.5	QPSK	1	0	48	20	55340	3560	48	20	56640	3690	24.33	24.42	-0.09
48C-71A (48C SCC only)	71	5	133147	666.5	68621	620.5	QPSK	1	0	48	20	55340	3560	48	20	55538	3579.8	24.33	24.28	0.05
66A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.33	24.36	-0.03
66A-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	66	20	67036	2170	24.33	24.35	-0.02
46A-66C (46A SCC only)	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	46	20	46890	5160	24.33	24.25	0.08

LTE Down Link 4CA Call Setup

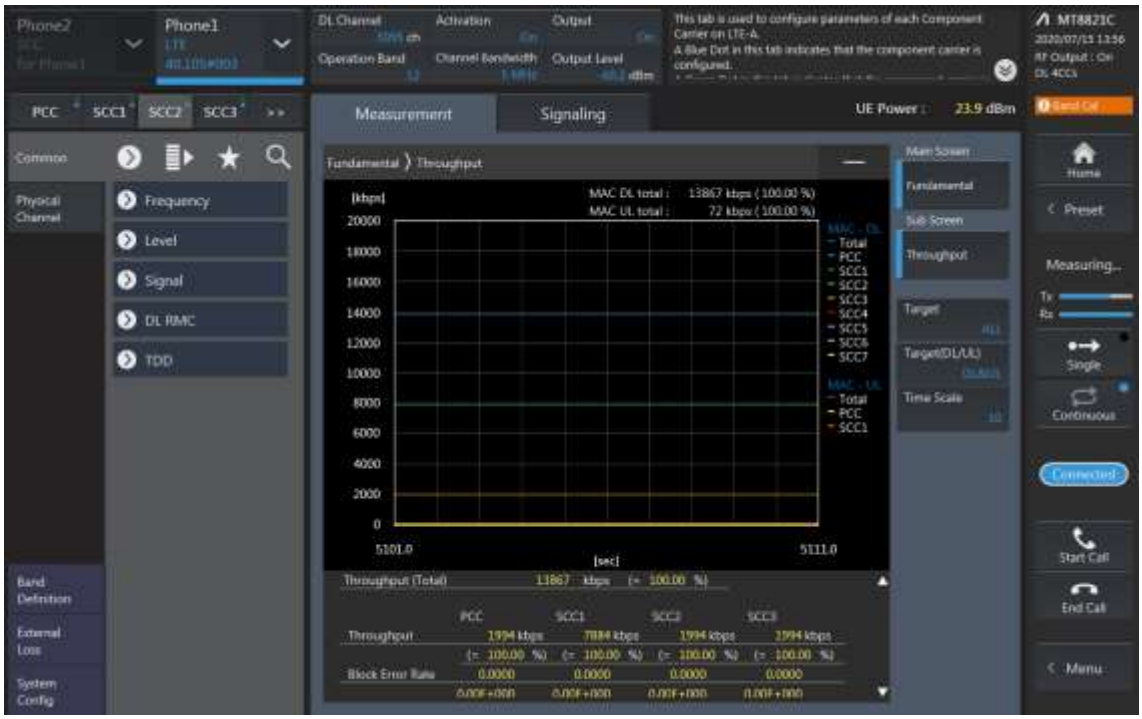
PCC Setting: Channel /RB/BW/Modulation



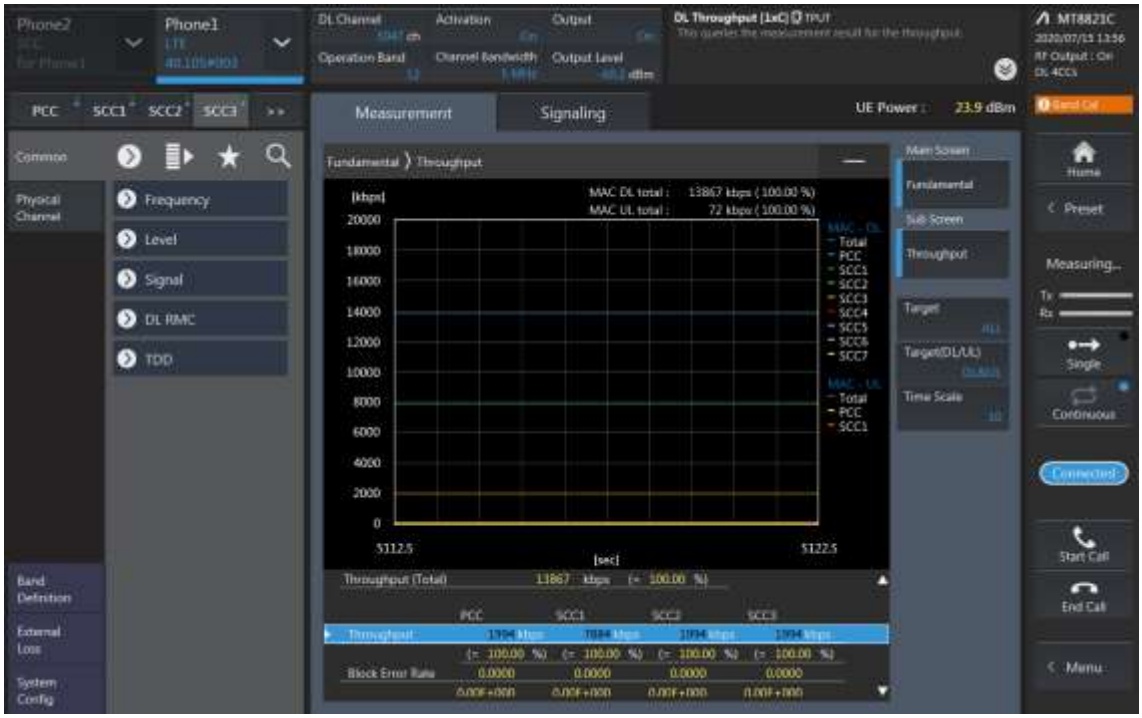
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



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



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



4CA Downlink Carrier aggregation Maximum conducted Powers

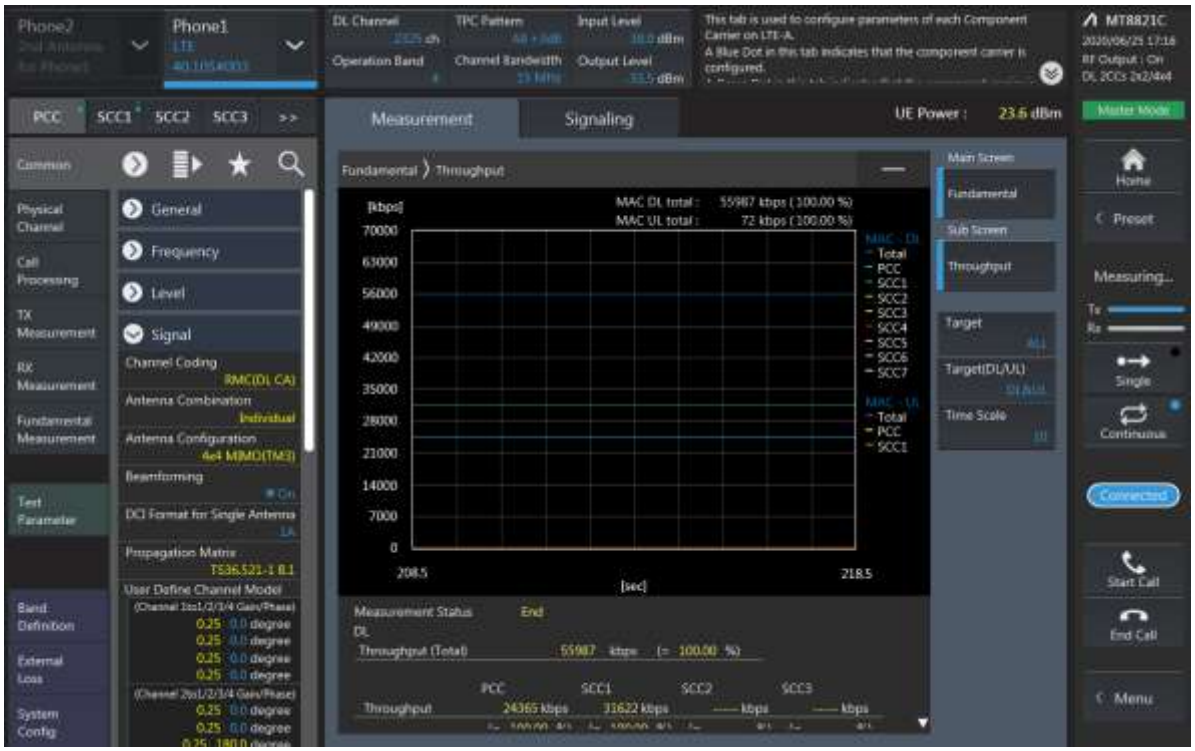
Combination	PCC									SCC				SCC				SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)	Deviation
2A-2A-4A-4A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	4	20	2050	2120	24.05	24	0.05
2A-2A-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	2	20	700	1940	24.43	24.52	-0.09
2A-2A-4A-5A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	5	10	2525	881.5	24.05	24.13	-0.08
2A-2A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.43	24.33	0.1
2A-2A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2050	2120	24.12	24.04	0.08
2A-2A-4A-12A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	12	10	5095	737.5	24.05	24.05	0
2A-2A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.43	24.49	-0.06
2A-2A-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2050	2120	24.24	24.28	-0.04
2A-2A-4A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	71	10	68761	634.5	24.05	23.95	0.1
2A-2A-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.43	24.5	-0.07
2A-2A-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.33	24.36	-0.03
2A-2A-5B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2476	876.6	5	10	2575	886.5	24.05	24.04	0.01
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	700	1940	24.12	24.17	-0.05
2A-2A-5A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	66	20	66786	2145	24.05	24.09	-0.04
2A-2A-5A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.12	24.2	-0.08
2A-2A-5A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.47	24.56	-0.09
2A-2A-12B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	5	5048	732.8	12	10	5120	740	24.05	24.05	0
2A-2A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	700	1940	24.24	24.25	-0.01
2A-2A-12A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	66	20	66786	2145	24.05	24.1	-0.05
2A-2A-12A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.24	24.31	-0.07
2A-2A-12A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.47	24.57	-0.1
2A-2A-13A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	13	10	5230	751	66	20	66786	2145	24.05	24.08	-0.03
2A-2A-13A-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.11	24.19	-0.08
2A-2A-13A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	13	10	5230	751	24.47	24.5	-0.03
2A-2A-14A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	14	10	5330	763	66	20	66786	2145	24.05	24	0.05
2A-2A-14A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.55	24.53	0.02
2A-2A-14A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	14	10	5330	763	24.47	24.37	0.1
2A-2A-46C (46C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	2	200	700	1940	46	20	50692	5540.2	46	20	50890	5560	24.05	24.14	-0.09
2A-2A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	66536	2120	24.05	24.02	0.03
2A-2A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	700	1940	24.47	24.5	-0.03
2A-2A-66B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	10	66837	2150.1	66	10	66936	2160	24.05	24	0.05
2A-2A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	2	20	700	1940	24.47	24.38	0.09
2A-2A-66C	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.03	0.02
2A-2A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	2	20	700	1940	24.47	24.43	0.04
2C-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	702	1940.2	66	20	66786	2145	66	20	66536	2120	24.05	24.09	-0.04
2C-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	801	1950.1	2	20	999	1969.9	24.47	24.49	-0.02
2A-2A-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	71	10	68761	634.5	24.05	24	0.05
2A-2A-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.47	24.56	-0.09
2A-2A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.33	24.31	0.02
2A-4A-4A-5A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	20	2050	2120	5	10	2525	881.5	24.05	24	0.05
2A-4A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.43	24.41	0.02
2A-4A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	4	20	2175	2132.5	4	20	2050	2120	2	20	900	1960	24.12	24.03	0.09
2A-4A-5B	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	5	10	2476	876.6	5	10	2575	886.5	24.05	24.06	-0.01
2A-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2476	876.6	5	20	2575	886.5	24.43	24.35	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	24.12	24.09	0.03
2A-4A-4A-12A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	20	2050	2120	12	10	5095	737.5	24.05	24.02	0.03
2A-4A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.43	24.5	-0.07
2A-4A-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	4	20	2175	2132.5	4	20	2050	2120	2	20	900	1960	24.24	24.16	0.08
2A-4A-12B	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	12	5	5048	732.8	12	10	5120	740	24.05	23.95	0.1
2A-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5048	732.8	12	10	5120	740	24.43	24.48	-0.05
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	24.24	24.33	-0.09
2A-5B-66A	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2476	876.6	5	10	2575	886.5	66	20	66786	2145	24.05	24.03	0.02
2A-5B-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	24.12	24.09	0.03
2A-5B-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2476	876.6	5	10	2575	886.5	2	20	900	1960	24.47	24.55	-0.08
2A-5A-46C (46C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	46	20	50692	5540.2	46	20	50890	5560	24.05	23.97	0.08
2A-5A-46C (46C SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50692	5540.2	46	20	50890	5560	24.12	24.18	-0.06
2A-5A-48C (48C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	48	20	55891	3615.1	48	20	56089	3634.9	24.05	24.04	0.01
2A-5A-48C (48C SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	48	20	56089	3634.9	24.12	24.15	-0.03

2A-5A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	66	20	66536	2120	24.05	23.96	0.09
2A-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.12	24.1	0.02
2A-5A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	24.47	24.45	0.02
2A-5A-66B	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	10	66837	2150.1	66	10	66936	2160	24.05	24.09	-0.04
2A-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	10	66837	2150.1	66	10	66936	2160	24.12	24.08	0.04
2A-5A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	5	10	2525	881.5	24.47	24.37	0.1
2A-5A-66C	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.14	-0.09
2A-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	66	20	66787	2145.1	66	20	66985	2164.9	2	20	900	1960	24.12	24.22	-0.1
2A-5A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	5	10	2525	881.5	2	20	900	1960	24.47	24.47	0
2A-12B-66A	2	20	18900	1880	900	1960	QPSK	1	99	12	5	5048	732.8	12	10	5120	740	66	20	66786	2145	24.05	24.04	0.01
2A-12B-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	24.24	24.16	0.08
2A-12B-66A	66	5	132322	1745	66786	2145	QPSK	1	12	12	5	5048	732.8	12	10	5120	740	2	20	900	1960	24.47	24.39	0.08
2A-12A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	66	20	66536	2120	24.05	24.05	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	66536	2120	24.24	24.31	-0.07
2A-12A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.47	24.48	-0.01
2A-12A-66C	2	20	18900	1880	900	1960	QPSK	1	99	12	10	5095	737.5	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.12	-0.07
2A-12A-66C	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66787	2145.1	66	20	66985	2164.9	24.24	24.15	0.09
2A-12A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	12	10	5095	737.5	24.47	24.49	-0.02
2A-13A-46C (46C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	46	20	50692	5540.2	46	20	50890	5560	24.05	24.12	-0.07
2A-13A-46C (46C SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	46	20	50692	5540.2	46	20	50890	5560	24.11	24.05	0.06
2A-13A-48C (48C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	48	20	55891	3615.1	46	20	56089	3634.9	24.05	24.12	-0.07
2A-13A-48C (48C SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	46	20	56089	3634.9	24.11	24.17	-0.06
2A-13A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	20	66786	2145	66	20	66536	2120	24.05	24.11	-0.06
2A-13A-66A-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.11	24.12	-0.01
2A-13A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.47	24.55	-0.08
2A-13A-66B	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	10	66837	2150.1	66	10	66936	2160	24.05	24.14	-0.09
2A-13A-66B	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	10	66837	2150.1	66	10	66936	2160	24.11	24.12	-0.01
2A-13A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	13	10	5230	751	24.47	24.48	-0.01
2A-13A-66C	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.03	0.02
2A-13A-66C	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	20	66787	2145.1	66	20	66985	2164.9	24.11	24.03	0.08
2A-13A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	13	10	5230	751	24.47	24.53	-0.06
2A-14A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	14	10	5330	763	66	20	66786	2145	66	20	66536	2120	24.05	24.09	-0.04
2A-14A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.55	24.51	0.04
2A-14A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	14	10	5330	763	24.47	24.56	-0.09
2A-46A-46C (46A 46C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	46	20	54142	5885.2	46	20	54340	5905	24.05	24.01	0.04
2A-46A-48C (46A 48C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	48	20	55891	3615.1	48	20	56089	3634.9	24.05	23.98	0.07
2A-46A-66A-66A (46A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.05	24.14	-0.09
2A-46A-66A-66A (46A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	46	20	46890	5160	24.47	24.37	0.1
2A-46C-48A (46C 48A SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50692	5540.2	46	20	50890	5560	48	20	55340	3560	24.05	24.07	-0.02
2A-46C-66A (46C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50692	5540.2	46	20	50890	5560	66	20	66786	2145	24.05	24.12	-0.07
2A-46C-66A (46C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50692	5540.2	46	20	50890	5560	24.47	24.41	0.06
2A-46D (46D SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50492	5520.2	46	20	50690	5540	46	20	50888	5559.8	24.05	24.11	-0.06
2A-48A-48C (48A 48C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	55891	3615.1	48	20	56089	3634.9	24.05	24.08	-0.03
2A-48C-66A (48C SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55891	3615.1	48	20	56089	3634.9	66	20	66786	2145	24.05	23.99	0.06
2A-48C-66A (48C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	48	20	56089	3634.9	24.47	24.56	-0.09
2A-48D (48D SCC only)	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55792	3605.2	48	20	55990	3625	48	20	56188	3644.8	24.05	24.12	-0.07
2A-66A-66B	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	15	67218	2188.2	66	5	67311	2197.5	24.05	24.14	-0.09
2A-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	66	20	67036	2170	2	20	900	1960	24.47	24.51	-0.04
2A-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	67218	2188.2	66	5	67311	2197.5	2	20	900	1960	24.47	24.45	0.02
2A-66A-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	20	66536	2120	71	10	68761	634.5	24.05	24.03	0.02
2A-66A-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	71	10	68761	634.5	2	20	900	1960	24.47	24.49	-0.02
2A-66A-66A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	66	20	66536	2120	66	20	67236	2190	2	20	900	1960	24.33	24.32	0.01
2A-66C-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66787	2145.1	66	20	66985	2164.9	71	10	68761	634.5	24.05	24.06	-0.01
2A-66C-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	71	10	68761	634.5	2	20	900	1960	24.47	24.48	-0.01
2A-66C-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	2	20	900	1960	66	20	66536	2120	66	20	67236	2190	24.33	24.24	0.09
4A-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	5	10	2476	876.6	5	10	2575	886.5	24.43	24.37	0.06
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	24.12	24.18	-0.06
4A-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	12	5	5048	732.8	12	10	5120	740	24.43	24.52	-0.09
4A-4A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	4	20	2050	2120	4	20	2300	2145	24.24	24.34	-0.1
4A-46A-46C (46C SCC only)	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	46890	5160	46	20	54142	5885.2	46	20	54340	5905	24.43	24.5	-0.07
4A-46D (46D SCC only)	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	53942	5865.2	46	20	54140	5885	46	20	54338	5904.8	24.43	24.51	-0.08
4A-48D (48D SCC only)	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55792	3605.2	48	20	55990	3625	48	20	56188	3644.8	24.43	24.4	0.03
5A-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2525	881.5	66	20	66786	2145	66	20	66536	2120	24.12	24.02	0.1
5A-5A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	5	10	2450	874	5	10	2600	889	24.47	24.55	-0.08
5A-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2525	881.5	66	10	66837	2150.1	66	10	66936	2160	24.12	24.12	0
5A-5A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	5	10	2450	874	5	10	2600	889	24.47	24.43	0.04
5A-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2525	881.5	66	20	66787	2145.1	66	20	66985	2164.9	24.12	24.05	0.07
5A-5A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	5	10	2450	874	5	10	2600	889	24.47	24.43	0.04
5B-46C (46C SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	46	20	54142	5885.2	46	20	54340	5905	24.12	24.07	0.05

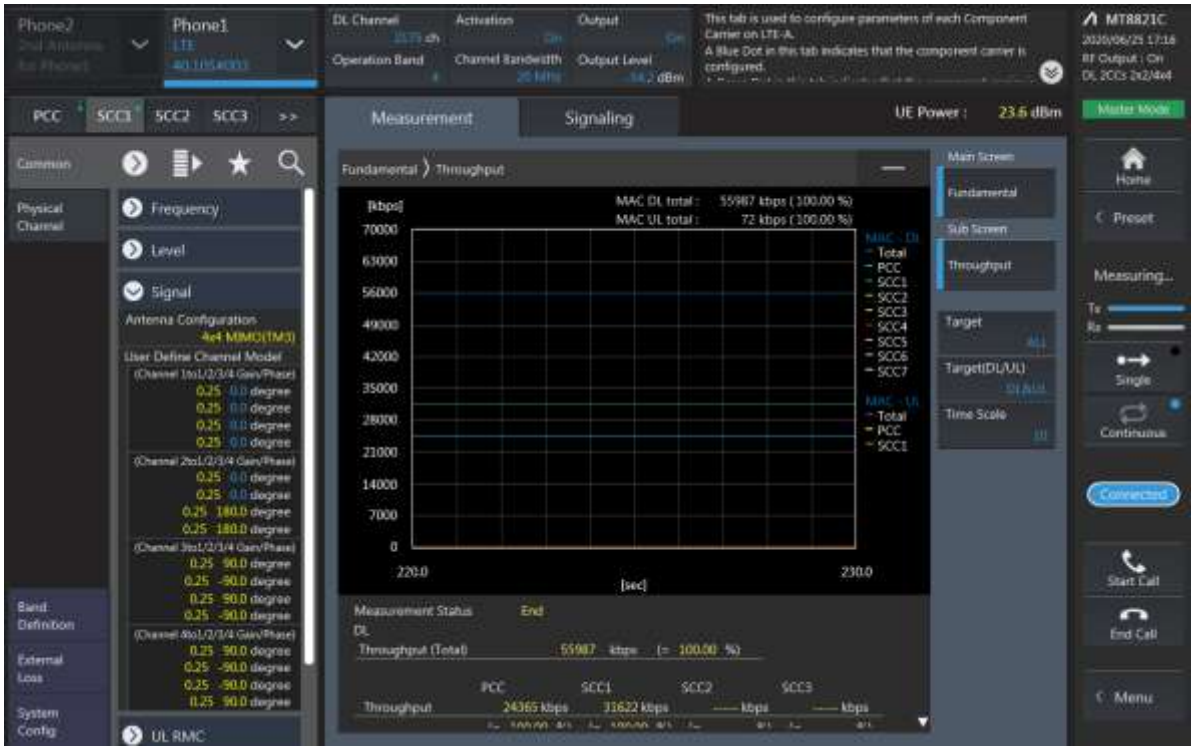
5B-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	66	20	66786	2145	66	20	66536	2120	24.12	24.06	0.06
5B-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	5	10	2450	874	5	10	2549	883.9	24.47	24.55	-0.08
5B-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	66	10	66837	2150.1	66	10	66936	2160	24.12	24.02	0.1
5B-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	5	10	2476	876.6	5	10	2575	886.5	24.47	24.57	-0.1
5B-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	66	20	66787	2145.1	66	20	66985	2164.9	24.12	24.11	0.01
5B-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	5	10	2476	876.6	5	10	2575	886.5	24.47	24.37	0.1
5A-46C-66A (46C SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	54142	5885.2	46	20	54340	5905	66	20	66786	2145	24.12	24.11	0.01
5A-46C-66A (46C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	46	20	54140	5885	46	20	54338	5904.8	24.47	24.44	0.03
5A-46D (46D SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	50492	5520.2	46	20	50690	5540	46	20	50888	5559.8	24.12	24.02	0.1
5A-48A-66A-66A (48A SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	66	20	66536	2120	24.12	24.21	-0.09
5A-48A-66A-66A (48A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	5	10	2476	876.6	48	20	55773	3603.3	24.47	24.49	-0.02
5A-48C-66A (48C SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55891	3615.1	48	20	56089	3634.9	66	20	66786	2145	24.12	24.02	0.1
5A-48C-66A (48C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2553	884.3	48	20	55990	3625	48	20	56188	3644.8	24.47	24.39	0.08
5A-48D (48D SCC only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55792	3605.2	48	20	55990	3625	48	20	56188	3644.8	24.12	24.11	0.01
12B-66A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	66	20	66786	2145	66	20	66536	2120	24.24	24.16	0.08
12B-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	12	5	5058	733.8	12	10	5130	741	24.47	24.48	-0.01
12A-46D (46D SCC only)	12	5	23155	713.5	5155	743.5	QPSK	1	12	46	20	50492	5520.2	46	20	50690	5540	46	20	50888	5559.8	24.24	24.19	0.05
13A-46A-66A-66A (46A SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.11	24.16	-0.05
13A-46A-66A-66A (46A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	13	10	5230	751	46	20	54340	5905	24.47	24.56	-0.09
13A-46C-66A (46C SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	46	20	50692	5540.2	46	20	50890	5560	66	20	66786	2145	24.11	24.14	-0.03
13A-46C-66A (46C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50692	5540.2	46	20	50890	5560	13	10	5230	751	24.47	24.39	0.08
13A-46D (46D SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	46	20	50492	5520.2	46	20	50690	5540	46	20	50888	5559.8	24.11	24.03	0.08
13A-48A-48C (48A 48C SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	48	20	56442	3670.2	48	20	56640	3690	24.11	24.15	-0.04
13A-48A-66B (48A SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	56640	3690	66	10	66987	2165.1	66	10	67086	2175	24.11	24.04	0.07
13A-48A-66B (48A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	13	10	5230	751	48	20	55773	3603.3	24.47	24.42	0.05
13A-48A-66C (48A SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	56640	3690	66	20	67036	2170	66	20	67234	2189.8	24.11	24.2	-0.09
13A-48A-66C (48A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	13	10	5230	751	48	20	55773	3603.3	24.47	24.54	-0.07
13A-48C-66A (48C SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	56442	3670.2	48	20	56640	3690	48	20	55340	3560	24.11	24.09	0.02
13A-48C-66A (48C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	48	20	55891	3615.1	48	20	56089	3634.9	24.47	24.46	0.01
13A-48D (48D SCC only)	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	56244	3650.4	48	20	56442	3670.2	48	20	56640	3690	24.11	24.15	-0.04
13A-66A-66B	13	5	23205	779.5	5205	748.5	QPSK	1	12	66	20	66786	2145	66	15	67218	2188.2	66	5	67311	2197.5	24.11	24.1	0.01
13A-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	66	20	67036	2170	13	10	5230	751	24.47	24.43	0.04
13A-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	67218	2188.2	66	5	67311	2197.5	13	10	5230	751	24.47	24.4	0.07
46A-46C-66A (46A 46C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	46	20	54142	5885.2	46	20	54340	5905	24.47	24.39	0.08
46A-48C-66A (46A 48C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	48	20	56442	3670.2	48	20	56640	3690	24.47	24.39	0.08
46C-48A-66A (46C 48A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	54142	5885.2	46	20	54340	5905	48	20	55340	3560	24.47	24.48	-0.01
46C-66A-66A (46C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	46	20	54142	5885.2	46	20	54340	5905	24.47	24.57	-0.1
46D-66A (46D SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46892	5160.2	46	20	47090	5180	46	20	47288	5199.8	24.47	24.47	0
48A-48A-66A-66A (48A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	56640	3690	24.47	24.46	0.01
48A-48A-66B (48A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	48	20	55340	3560	48	20	56640	3690	24.47	24.46	0.01
48A-48A-66C (48A SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	48	20	55340	3560	48	20	56640	3690	24.47	24.41	0.06
48A-48C-66A (48A 48C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	48	20	55340	3560	48	20	56442	3670.2	48	20	56640	3690	24.47	24.37	0.1
48A-48D	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	56244	3650.4	48	20	56442	3670.2	48	20	56640	3690	24.47	24.46	0.01
48A-48D	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	55613	3587.3	48	20	55811	3607.1	48	20	56640	3690	24.47	24.52	-0.05
48C-48C	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	55613	3587.3	48	20	56442	3670.2	48	20	56640	3690	24.47	24.56	-0.09
48C-66A-66A (48C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	55538	3579.8	24.47	24.37	0.1
48C-66B (48C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	48	20	55340	3560	48	20	55538	3579.8	24.47	24.42	0.05
48C-66C (48C SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	48	20	55340	3560	48	20	55538	3579.8	24.47	24.54	-0.07
48D-66A (48D SCC only)	66	5	132322	1745	66786	2145	QPSK	1	12	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.47	24.49	-0.02
48E	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	55613	3587.3	48	20	55811	3607.1	48	20	56009	3626.9	24.47	24.45	0.02

LTE Down Link 2CA 4x4 MIMO Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



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

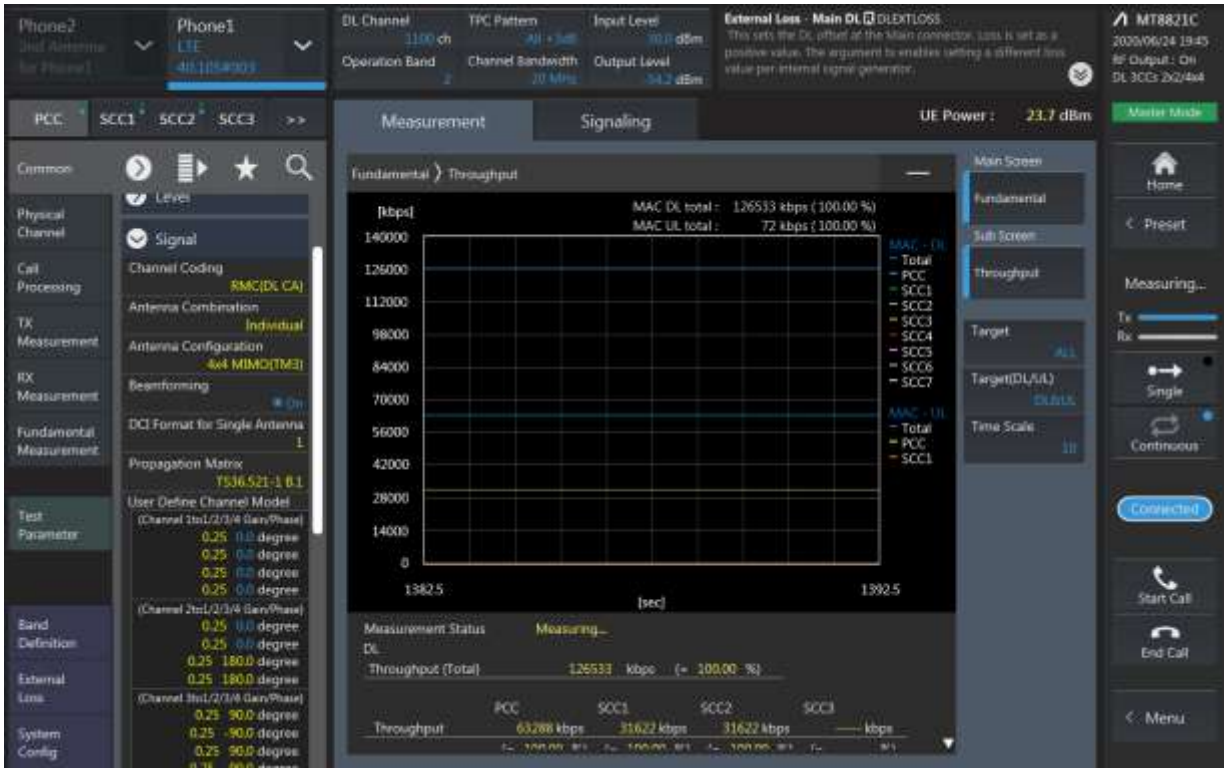


LTE Downlink 2CA 4X4 MIMO Maximum Conducted Power

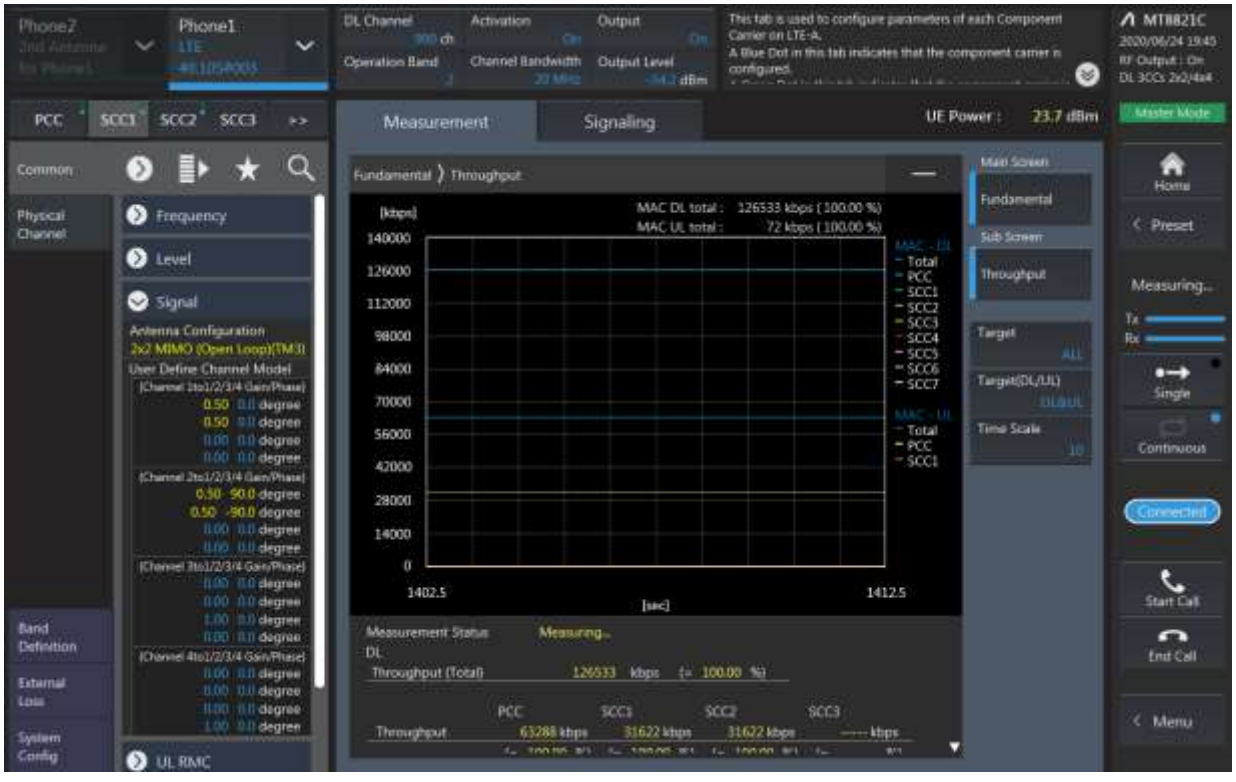
Combination	PCC									SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)	Deviation
[4A]-48A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55340	3560	24.43	24.32	0.11
4A-[48A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55340	3560	24.43	24.44	-0.01
[4A]-[48A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55340	3560	24.43	24.45	-0.02
5A-[25A] (ACG carrier only)	5	5	20625	846.5	2625	891.5	QPSK	1	12	25	20	8365	1962.5	24.12	24.13	-0.01
12A-[48A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	48	20	55340	3560	24.24	24.21	0.03
[25A]-25A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8090	1935	24.07	24.02	0.05
25A-[25A]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8090	1935	24.07	24.05	0.02
[25A]-[25A]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	10	8090	1935	24.07	24.01	0.06
[25A]-25A	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	20	8115	1937.5	24.07	24.03	0.04
25A-[25A]	25	5	26365	1882.5	8365	1962.5	QPSK	1	12	25	20	8115	1937.5	24.07	24.13	-0.06

LTE Down Link 3CA 4x4 MIMO Call Setup

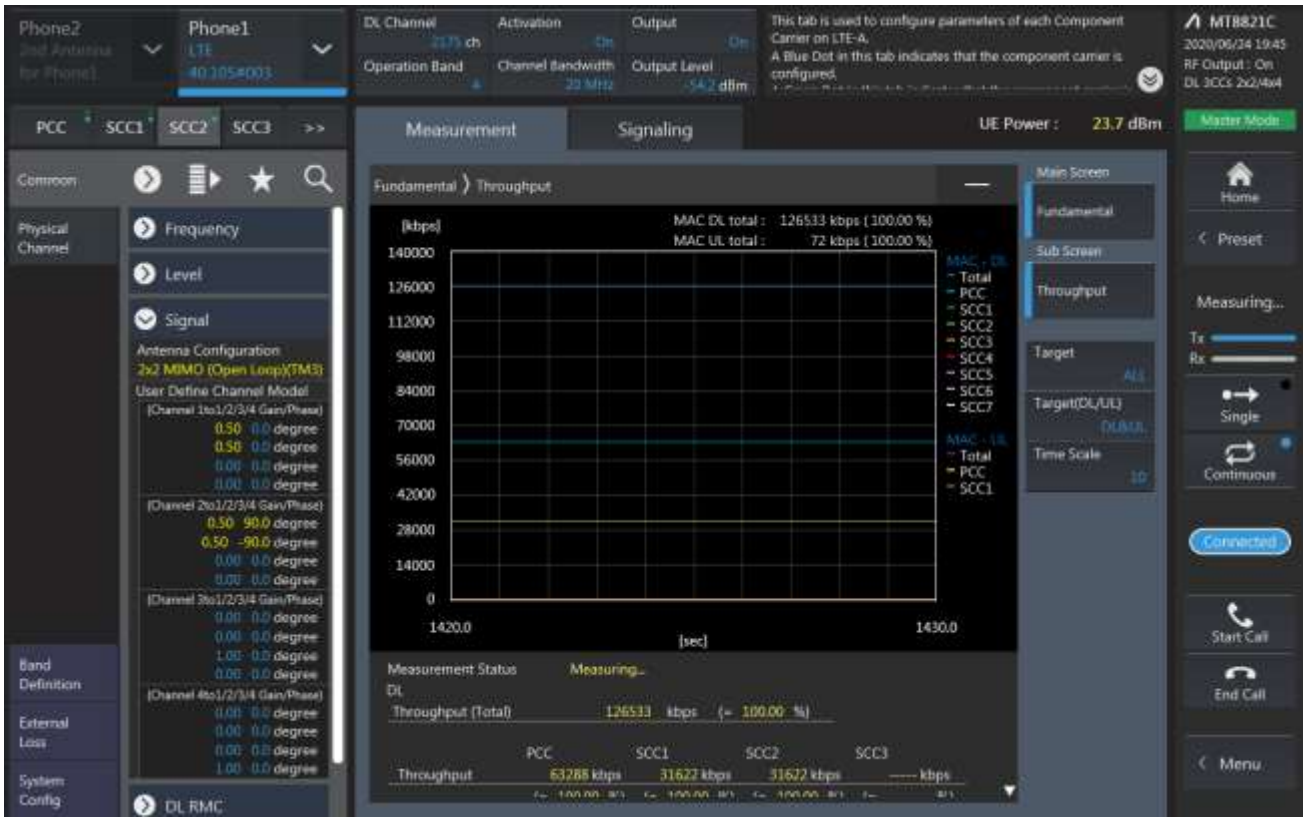
PCC Setting: Channel /RB/BW/Modulation



CC1 Setting : Channel /RB/BW/Modulation



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

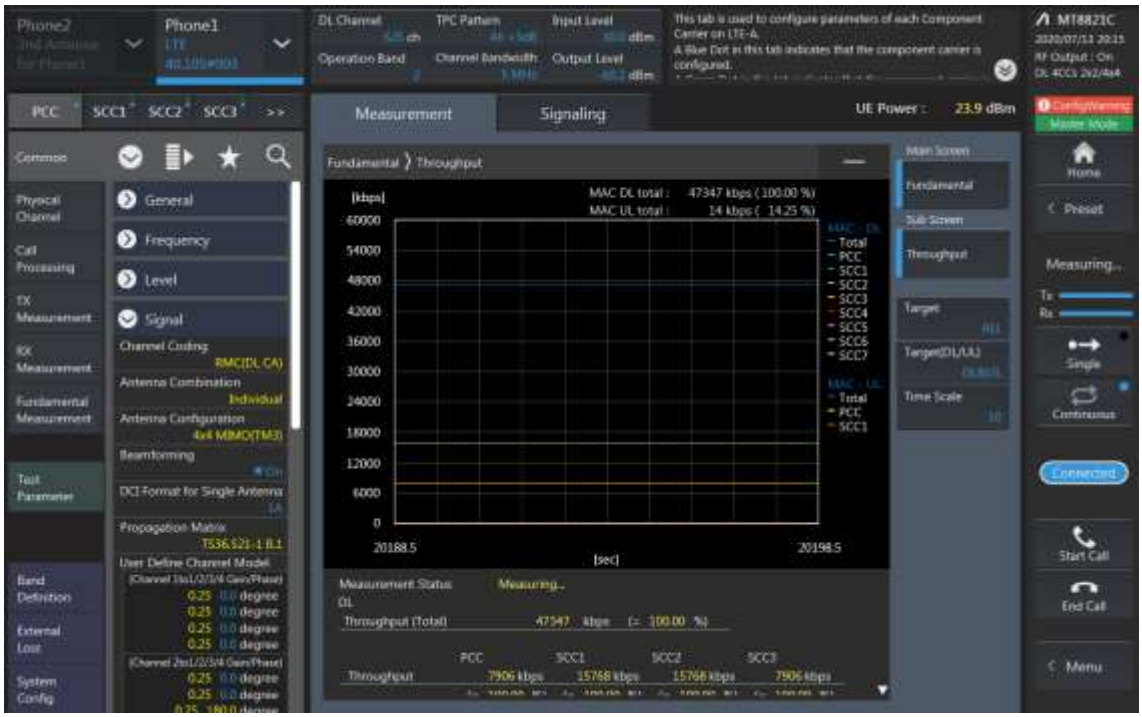


LTE Downlink 3CA 4X4 MIMO Maximum Conducted Power

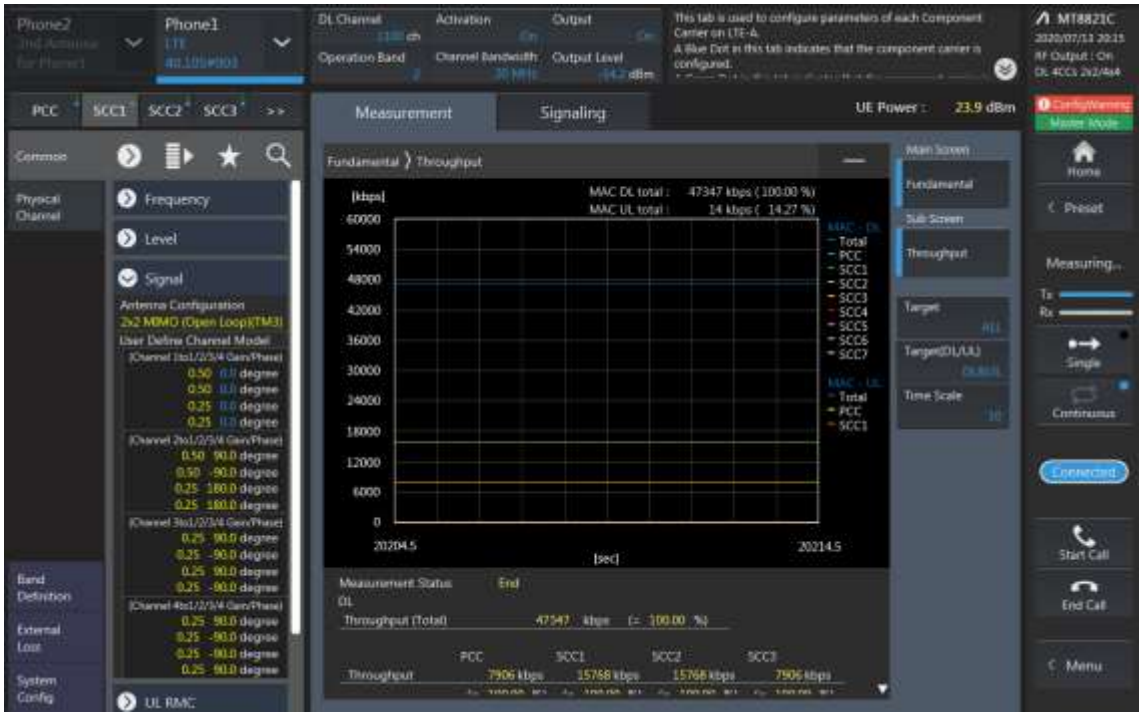
Combination	PCC									SCC				SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)	Deviation
[2A]-2A-29A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	29	10	9720	723	24.05	23.99	0.06
2A-[2A]-29A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	29	10	9720	723	24.05	24.03	0.02
[2A]-[2A]-29A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	29	10	9720	723	24.05	24.11	-0.06
[2A]-2A-46A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	46	20	46890	5160	24.05	24.15	-0.10
2A-[2A]-46A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	46	20	46890	5160	24.05	24.04	0.01
[2A]-[2A]-46A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	46	20	46890	5160	24.05	24.13	-0.08
[2A]-2A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	71	10	68761	634.5	24.05	24.11	-0.06
2A-[2A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	71	10	68761	634.5	24.05	24.07	-0.02
[2A]-[2A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	71	10	68761	634.5	24.05	23.95	0.10
[2A]-2A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	24.33	24.27	0.06
2A-[2A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	24.33	24.34	-0.01
[2A]-[2A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	24.33	24.36	-0.03
[2A]-4A-13A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	24.05	23.99	0.06
2A-[4A]-13A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	24.05	24.08	-0.03
[2A]-[4A]-13A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	24.05	23.98	0.07
[2A]-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	13	10	5230	751	2	20	900	1960	24.43	24.49	-0.06
2A-[4A]-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	13	10	5230	751	2	20	900	1960	24.43	24.44	-0.01
[2A]-[4A]-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	13	10	5230	751	2	20	900	1960	24.43	24.52	-0.09
[2A]-4A-13A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.34	24.28	0.06
2A-[4A]-13A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.34	24.25	0.09
[2A]-[4A]-13A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.34	24.42	-0.08
[2A]-5A-46A	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	46	20	46890	5160	24.05	24.14	-0.09
[2A]-5A-48A	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	48	20	55340	3560	24.05	24.02	0.03
2A-5A-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	48	20	55340	3560	24.05	24.12	-0.07
[2A]-5A-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	48	20	55340	3560	24.05	24.05	0.00
[2A]-13A-46A	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	46	20	46890	5160	24.05	24.11	-0.06
[2A]-13A-48A	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	48	20	55340	3560	24.05	24.00	0.05
2A-13A-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	48	20	55340	3560	24.05	24.03	0.02
[2A]-13A-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	48	20	55340	3560	24.05	23.99	0.06
[2A]-29A-66A	2	20	18900	1880	900	1960	QPSK	1	99	29	10	9720	723	66	20	66786	2145	24.05	24.02	0.03
2A-29A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	29	10	9720	723	66	20	66786	2145	24.05	24.10	-0.05
[2A]-29A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	29	10	9720	723	66	20	66786	2145	24.05	23.96	0.09
[2A]-46A-46A	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	46	20	54340	5905	24.05	24.14	-0.09
[2A]-46A-48A	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	48	20	55340	3560	24.05	23.98	0.07
2A-46A-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	48	20	55340	3560	24.05	24.14	-0.09
[2A]-46A-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	48	20	55340	3560	24.05	23.99	0.06
[2A]-48A-48A	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	56640	3690	24.05	24.09	-0.04
2A-[48A]-48A	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	56640	3690	24.05	24.12	-0.07
2A-[48A]-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	56640	3690	24.05	23.97	0.08
[2A]-[48A]-48A	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	56640	3690	24.05	24.12	-0.07
[2A]-48A-66A	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	66	20	66786	2145	24.05	24.01	0.04
2A-[48A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	66	20	66786	2145	24.05	24.15	-0.10
2A-48A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	66	20	66786	2145	24.05	23.99	0.06
[2A]-[48A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	66	20	66786	2145	24.05	23.99	0.06
[2A]-48A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	66	20	66786	2145	24.05	24.09	-0.04
2A-[48A]-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	66	20	66786	2145	24.05	24.07	-0.02
[4A]-4A-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	13	10	5205	748.5	24.43	24.48	-0.05
4A-[4A]-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	13	10	5205	748.5	24.43	24.43	0.00
[4A]-[4A]-13A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	13	10	5205	748.5	24.43	24.53	-0.10
[4A]-4A-13A	13	5	23205	779.5	5205	748.5	QPSK	1	12	4	20	2050	2120	4	20	2300	2145	24.34	24.29	0.05
4A-[4A]-13A	13	5	23205	779.5	5205	748.5	QPSK	1	12	4	20	2050	2120	4	20	2300	2145	24.34	24.34	0.00
[4A]-[4A]-13A	13	5	23205	779.5	5205	748.5	QPSK	1	12	4	20	2050	2120	4	20	2300	2145	24.34	24.33	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	24.34	24.32	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	24.43	24.51	-0.08
[4A]-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	71	20	68761	634.5	24.43	24.51	-0.08
[4A]-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	71	20	68761	634.5	24.43	24.41	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	24.43	24.49	-0.06
[4A]-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2300	2145	71	20	68761	634.5	24.43	24.34	0.09
[4A]-4A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	4	20	2175	2132.5	4	20	2300	2145	24.33	24.28	0.05
4A-[4A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	4	20	2175	2132.5	4	20	2300	2145	24.33	24.40	-0.07
[4A]-[4A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	4	20	2175	2132.5	4	20	2300	2145	24.33	24.37	-0.04
[4A]-4A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	4	20	2175	2132.5	4	20	2300	2145	24.33	24.33	0.00
4A-[4A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	4	20	2175	2132.5	4	20	2300	2145	24.33	24.27	0.06
[4A]-[4A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	4	20	2175	2132.5	4	20	2300	2145	24.33	24.26	0.07
[4A]-46A-46A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	46890	5160	46	20	54340	5905	24.43	24.42	0.01
[4A]-46C	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	54142	5885.2	46	20	54340	5905	24.43	24.44	-0.01
[4A]-48C	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55340	3560	48	20	55538	3579.8	24.43	24.49	-0.06
4A-[48C]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55340	3560	48	20	55538	3579.8	24.43	24.36	0.07
[4A]-[48C]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55340	3560	48	20	55538	3579.8	24.43	24.53	-0.10
12A-[48C]	12	5	23155	713.5	5155	743.5	QPSK	1	12	48	20	55340	3560	48	20	55538	3579.8	24.24	24.19	0.05
13A-46A-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	46	20	46890	5160	66	20	66786	2145	24.34	24.42	-0.08
13A-[48A]-48A	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	48	20	56640	3690	24.34	24.28	0.06
13A-[48A]-[48A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	48	20	56640	3690	24.34	24.38	-0.04
13A-[48A]-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	24.34	24.38	-0.04
13A-48A-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	24.34	24.39	-0.05
13A-[48A]-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	24.34	24.41	-0.07
29A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	29	10	9720	723	66	20	66786	2145	24.17	24.07	0.10
29A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	29	10	9720	723	66	20	66786	2145	24.17	24.24	-0.07
46A-46A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	46	20	54340	5905	24.17	24.07	0.10
46A-[48A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	48	20	56640	3690	24.17	24.15	0.02
46A-48A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	48	20	56640	3690	24.17	24.27	-0.10
46A-[48A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	48	20	56640	3690	24.17	24.19	-0.02
[48A]-48A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	48	20	55340	3560	48	20	56640	3690	24.33	24.33	0.00
48A-[48A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	48	20	55340	3560	48	20	56640	3690	24.33	24.36	-0.03
[48A]-[48A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	48	20	55340	3560	48	20	56640	3690	24.33	24.39	-0.06
[48C]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	48	20	55340	3560	48	20	55538	3579.8	24.33	24.33	0.00
[66A]-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.17	24.25	-0.08
66A-[66C]	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.17	24.24	-0.07
[66A]-[66C]	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.17	24.17	0.00
[66A]-66C	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	66	20	67036	2170	24.17	24.20	-0.03
66A-[66C]	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	66	20	67036	2170	24.17	24.25	-0.08
[66A]-[66C]	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	66	20	67036	2170	24.17	24.07	0.10
46A-[66C]	66	5	131997	1712.5	66461	2112.5	QPSK	1	12	66	20	66578	2124.2	46	20	46890	5160	24.17	24.11	0.06

LTE Down Link 4CA 4x4 MIMO Call Setup

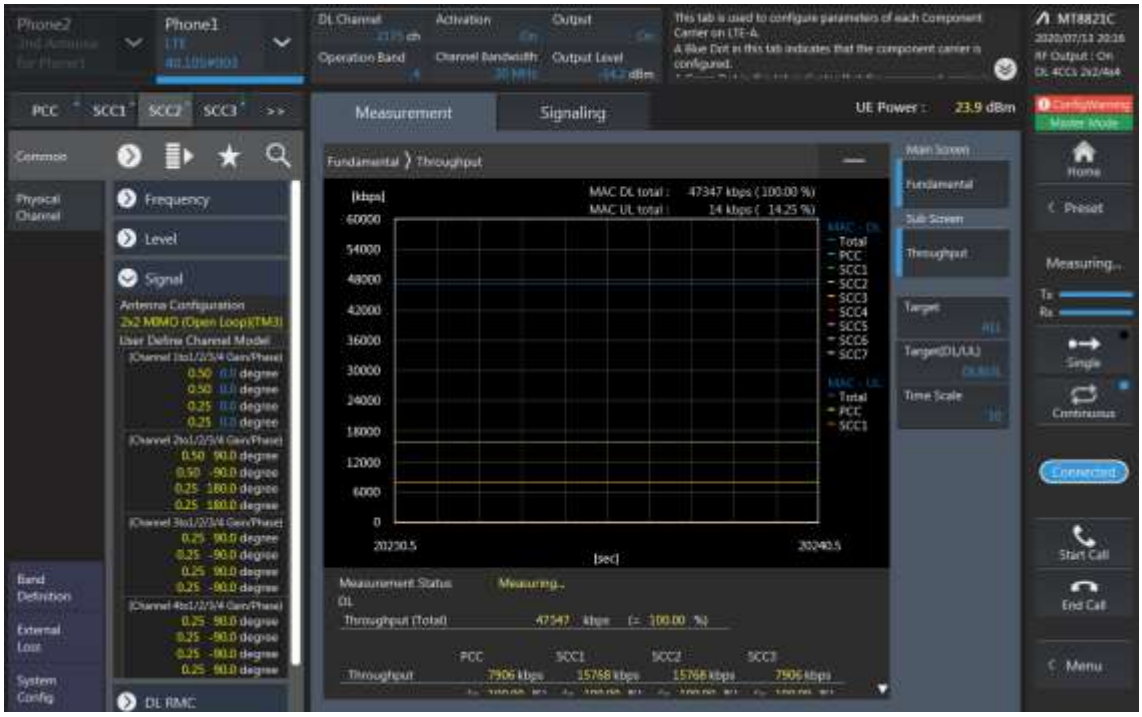
PCC Setting: Channel /RB/BW/Modulation



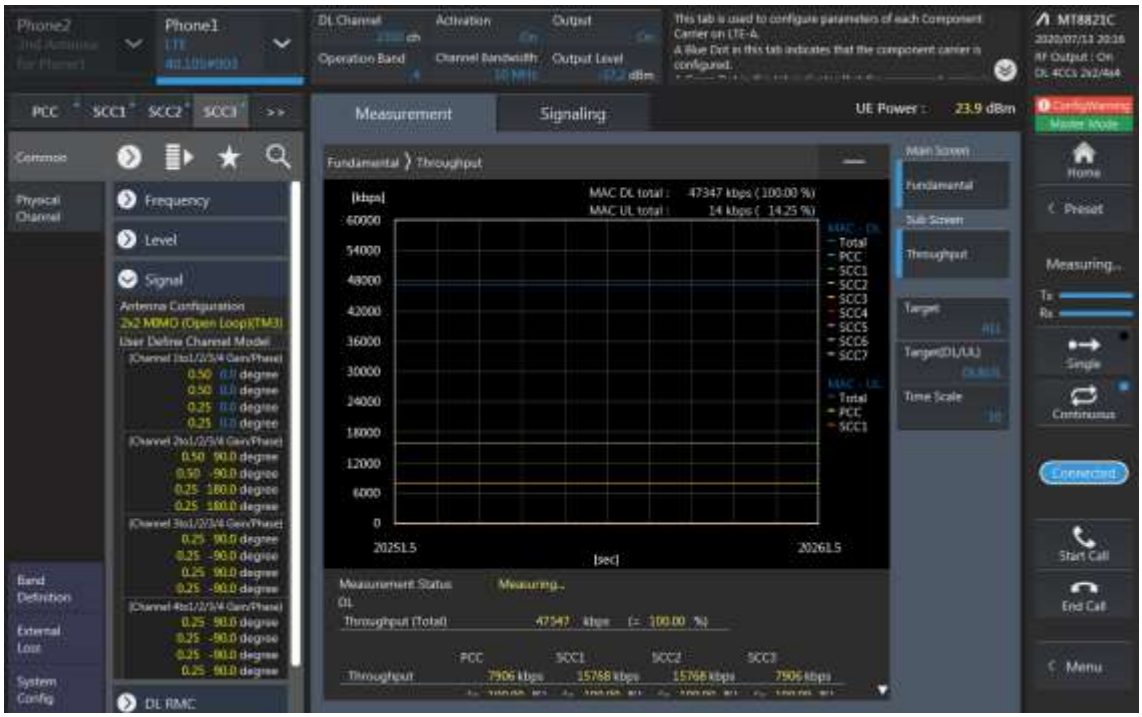
SCC1 Setting : Channel /RB/BW/Modulation



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



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



LTE Downlink 4CA 4X4 MIMO Maximum Conducted Power

Combination	PCC									SCC				SCC				SCC				Tx Power		
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)	Deviation
[2A]-2A-4A-4A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	4	10	2350	2150	24.05	24.09	-0.04
2A-[2A]-4A-4A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	4	10	2350	2150	24.05	24.06	-0.01
2A-2A-[4A]-4A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	4	10	2350	2150	24.05	24.06	-0.01
[2A]-[2A]-4A-4A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	4	10	2350	2150	24.05	24.05	0
[2A]-2A-[4A]-4A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	4	10	2350	2150	24.05	24.06	-0.01
2A-[2A]-[4A]-4A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	4	10	2350	2150	24.05	24.01	0.04
2A-2A-[4A]-[4A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	4	10	2350	2150	24.05	24.12	-0.07
[2A]-2A-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	2	20	700	1940	24.43	24.34	0.09
2A-[2A]-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	2	20	700	1940	24.43	24.43	0
2A-2A-[4A]-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	2	20	700	1940	24.43	24.34	0.09
[2A]-[2A]-4A-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	2	20	700	1940	24.43	24.47	-0.04
[2A]-2A-[4A]-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	2	20	700	1940	24.43	24.48	-0.05
2A-[2A]-[4A]-4A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	2	20	700	1940	24.43	24.44	-0.01
2A-2A-[4A]-[4A]	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	2	20	700	1940	24.43	24.47	-0.04
[2A]-2A-4A-5A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	5	10	2525	881.5	24.05	24.03	0.02
2A-[2A]-4A-5A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	5	10	2525	881.5	24.05	24.06	-0.01
2A-2A-[4A]-5A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	5	10	2525	881.5	24.05	24	0.05
[2A]-[2A]-4A-5A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	5	10	2525	881.5	24.05	24.02	0.03
[2A]-2A-[4A]-5A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	5	10	2525	881.5	24.05	24.12	-0.07
2A-[2A]-[4A]-5A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	5	10	2525	881.5	24.05	24.11	-0.06
[2A]-2A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.43	24.42	0.01
2A-[2A]-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.43	24.45	-0.02
2A-2A-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.43	24.49	-0.06
[2A]-[2A]-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.43	24.5	-0.07
[2A]-2A-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.43	24.52	-0.09
2A-[2A]-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.43	24.43	0
[2A]-2A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.12	24.08	0.04
2A-[2A]-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.12	24.07	0.05
2A-2A-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.12	24.07	0.05
[2A]-[2A]-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.12	24.09	0.03
[2A]-2A-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.12	24.22	-0.1
2A-[2A]-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.12	24.11	0.01
[2A]-2A-4A-12A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	12	10	5095	737.5	24.05	24.04	0.01
2A-[2A]-4A-12A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	12	10	5095	737.5	24.05	24.13	-0.08
2A-2A-[4A]-12A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	12	10	5095	737.5	24.05	24.14	-0.09
[2A]-[2A]-4A-12A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	12	10	5095	737.5	24.05	24.04	0.01
[2A]-2A-[4A]-12A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	12	10	5095	737.5	24.05	23.99	0.06
2A-[2A]-[4A]-12A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	12	10	5095	737.5	24.05	23.99	0.06
[2A]-2A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.43	24.46	-0.03
2A-[2A]-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.43	24.41	0.02
2A-2A-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.43	24.45	-0.02
[2A]-[2A]-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.43	24.42	0.01
[2A]-2A-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.43	24.47	-0.04
2A-[2A]-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.43	24.4	0.03
[2A]-2A-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2050	2120	24.24	24.23	0.01
2A-[2A]-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2050	2120	24.24	24.14	0.1
2A-2A-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2050	2120	24.24	24.32	-0.08
[2A]-[2A]-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2050	2120	24.24	24.14	0.1
[2A]-2A-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2050	2120	24.24	24.25	-0.01
2A-[2A]-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	4	20	2050	2120	24.24	24.3	-0.06
[2A]-2A-4A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	71	10	68761	634.5	24.05	24.05	0
2A-[2A]-4A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	71	10	68761	634.5	24.05	23.99	0.06
2A-2A-[4A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	71	10	68761	634.5	24.05	24.08	-0.03
[2A]-[2A]-4A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	71	10	68761	634.5	24.05	24.07	-0.02
[2A]-2A-[4A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	71	10	68761	634.5	24.05	24.15	-0.1
2A-[2A]-[4A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	71	10	68761	634.5	24.05	24.14	-0.09
[2A]-2A-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.43	24.4	0.03
2A-[2A]-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.43	24.33	0.1
2A-2A-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.43	24.37	0.06
[2A]-[2A]-4A-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.43	24.37	0.06
[2A]-2A-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.43	24.45	-0.02
2A-[2A]-[4A]-71A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.43	24.51	-0.08
[2A]-2A-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.33	24.43	-0.1
2A-[2A]-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.33	24.37	-0.04
2A-2A-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.33	24.41	-0.08
[2A]-[2A]-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.33	24.43	-0.1
[2A]-2A-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.33	24.25	0.08
2A-[2A]-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	4	20	2175	2132.5	24.33	24.4	-0.07

[2A]-2A-5B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2476	876.6	5	10	2575	886.5	24.05	24.12	-0.07
2A-[2A]-5B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2476	876.6	5	10	2575	886.5	24.05	24.01	0.04
[2A]-[2A]-5B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2476	876.6	5	10	2575	886.5	24.05	24.05	0
[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	700	1940	24.12	24.02	0.1
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	700	1940	24.12	24.03	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	700	1940	24.12	24.22	-0.1
[2A]-2A-5A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	66	20	66786	2145	24.05	23.98	0.07
2A-[2A]-5A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	66	20	66786	2145	24.05	24.02	0.03
2A-2A-5A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	66	20	66786	2145	24.05	24.13	-0.08
[2A]-[2A]-5A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	66	20	66786	2145	24.05	24.11	-0.06
[2A]-2A-5A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	66	20	66786	2145	24.05	24.1	-0.05
2A-[2A]-5A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	66	20	66786	2145	24.05	24.15	-0.1
[2A]-2A-5A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.12	24.15	-0.03
2A-[2A]-5A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.12	24.2	-0.08
2A-2A-5A-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.12	24.05	0.07
[2A]-[2A]-5A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.12	24.12	0
[2A]-2A-5A-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.12	24.07	0.05
2A-[2A]-5A-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.12	24.16	-0.04
[2A]-2A-5A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.47	24.57	-0.1
2A-[2A]-5A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.47	24.4	0.07
2A-2A-5A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.47	24.41	0.06
[2A]-[2A]-5A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.47	24.48	-0.01
[2A]-2A-5A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.47	24.37	0.1
2A-[2A]-5A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	2	20	900	1960	2	20	700	1940	24.47	24.54	-0.07
[2A]-2A-12B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	5	5048	732.8	12	10	5120	740	24.05	23.96	0.09
2A-[2A]-12B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	5	5048	732.8	12	10	5120	740	24.05	24.13	-0.08
[2A]-[2A]-12B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	5	5048	732.8	12	10	5120	740	24.05	24.09	-0.04
[2A]-2A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	700	1940	24.24	24.31	-0.07
2A-[2A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	700	1940	24.24	24.28	-0.04
[2A]-[2A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	2	20	900	1960	2	20	700	1940	24.24	24.14	0.1
[2A]-2A-12A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	66	20	66786	2145	24.05	24.03	0.02
2A-[2A]-12A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	66	20	66786	2145	24.05	23.96	0.09
2A-2A-12A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	66	20	66786	2145	24.05	24.15	-0.1
[2A]-[2A]-12A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	66	20	66786	2145	24.05	24.05	0
[2A]-2A-12A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	66	20	66786	2145	24.05	24.08	-0.03
2A-[2A]-12A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	66	20	66786	2145	24.05	24.13	-0.08
[2A]-2A-12A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.24	24.2	0.04
2A-[2A]-12A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.24	24.23	0.01
2A-2A-12A-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.24	24.22	0.02
[2A]-[2A]-12A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.24	24.28	-0.04
[2A]-2A-12A-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.24	24.16	0.08
2A-[2A]-12A-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.24	24.28	-0.04
[2A]-2A-12A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.47	24.39	0.08
2A-[2A]-12A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.47	24.39	0.08
2A-2A-12A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.47	24.48	-0.01
[2A]-[2A]-12A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.47	24.49	-0.02
[2A]-2A-12A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.47	24.51	-0.04
2A-[2A]-12A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	12	10	5095	737.5	24.47	24.52	-0.05
[2A]-2A-13A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	13	10	5230	751	66	20	66786	2145	24.05	23.98	0.07
2A-[2A]-13A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	13	10	5230	751	66	20	66786	2145	24.05	24.04	0.01
2A-2A-13A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	13	10	5230	751	66	20	66786	2145	24.05	24.09	-0.04
[2A]-[2A]-13A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	13	10	5230	751	66	20	66786	2145	24.05	23.95	0.1
[2A]-2A-13A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	13	10	5230	751	66	20	66786	2145	24.05	23.96	0.09
2A-[2A]-13A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	13	10	5230	751	66	20	66786	2145	24.05	24.03	0.02
[2A]-2A-13A-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.34	24.43	-0.09
2A-[2A]-13A-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.34	24.26	0.08
2A-2A-13A-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.34	24.25	0.09
[2A]-[2A]-13A-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.34	24.27	0.07
[2A]-2A-13A-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.34	24.42	-0.08
2A-[2A]-13A-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.34	24.27	0.07
[2A]-2A-13A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	13	10	5230	751	24.47	24.39	0.08
2A-[2A]-13A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	13	10	5230	751	24.47	24.52	-0.05
2A-2A-13A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	13	10	5230	751	24.47	24.57	-0.1
[2A]-[2A]-13A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	13	10	5230	751	24.47	24.48	-0.01
[2A]-2A-13A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	13	10	5230	751	24.47	24.55	-0.08
2A-[2A]-13A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	13	10	5230	751	24.47	24.45	0.02
[2A]-2A-14A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	14	10	5330	763	66	20	66786	2145	24.05	23.98	0.07
2A-[2A]-14A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	14	10	5330	763	66	20	66786	2145	24.05	24.12	-0.07
2A-2A-14A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	14	10	5330	763	66	20	66786	2145	24.05	24.06	-0.01
[2A]-[2A]-14A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	14	10	5330	763	66	20	66786	2145	24.05	24.06	-0.01
[2A]-2A-14A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	14	10	5330	763	66	20	66786	2145	24.05	24.05	0
2A-[2A]-14A-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	14	10	5330	763	66	20	66786	2145	24.05	24.05	0
[2A]-2A-14A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.55	24.61	-0.06
2A-[2A]-14A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.55	24.6	-0.05
2A-2A-14A-[66A]	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.55	24.55	0
[2A]-[2A]-14A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.55	24.59	-0.04
[2A]-2A-14A-[66A]	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.55	24.56	-0.01
2A-[2A]-14A-[66A]	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.55	24.47	0.08
[2A]-2A-14A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	14	10	5330	763	24.47	24.46	0.01
2A-[2A]-14A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	14	10	5330	763	24.47	24.57	-0.1
2A-2A-14A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	14	10	5330	763	24.47	24.47	0
[2A]-[2A]-14A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	14	10	5330	763	24.47	24.51	-0.04
[2A]-2A-14A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	14	10	5330	763	24.47	24.51	-0.04
2A-[2A]-14A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	14	10	5330	763	24.47	24.51	-0.04
[2A]-2A-46C	2	20	18900	1880	900	1960	QPSK	1	99	2	200	700	1940	46	20	50692	5540.2	46	20	50890	5560	24.05	24.13	-0.08
2A-[2A]-46C	2	20	18900	1880	900	1960	QPSK	1	99	2	200	700	1940	46	20	50692	5540.2	46	20	50890	5560	24.05	24.1	-0.05
[2A]-[2A]-46C	2	20	18900	1880	900	1960	QPSK	1	99	2	200	700	1940	46	20	50692	5540.2	46	20	50890	5560	24.05	24.15	-0.1
[2A]-2A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	66536	2120	24.05	23.98	0.07
2A-[2A]-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	66536	2120	24.05	24.04	0.01

2A-2A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	66536	2120	24.05	24.13	-0.08
[2A]-[2A]-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	66536	2120	24.05	24.01	0.04
[2A]-2A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	66536	2120	24.05	24.13	-0.08
2A-[2A]-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	66536	2120	24.05	24.07	-0.02
2A-2A-[66A]-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	66536	2120	24.05	24.15	-0.1
[2A]-2A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	700	1940	24.47	24.55	-0.08
2A-[2A]-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	700	1940	24.47	24.41	0.06
2A-2A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	700	1940	24.47	24.51	-0.04
[2A]-[2A]-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	700	1940	24.47	24.42	0.05
[2A]-2A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	700	1940	24.47	24.38	0.09
2A-[2A]-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	700	1940	24.47	24.44	0.03
2A-2A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	700	1940	24.47	24.52	-0.05
[2A]-2A-66B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	10	66837	2150.1	66	10	66936	2160	24.05	24.02	0.03
2A-[2A]-66B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	10	66837	2150.1	66	10	66936	2160	24.05	23.99	0.06
2A-2A-[66B]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	10	66837	2150.1	66	10	66936	2160	24.05	24.11	-0.06
[2A]-[2A]-66B	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	10	66837	2150.1	66	10	66936	2160	24.05	24.03	0.02
[2A]-2A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	2	20	700	1940	24.47	24.38	0.09
2A-[2A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	2	20	700	1940	24.47	24.48	-0.01
2A-2A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	2	20	700	1940	24.47	24.49	-0.02
[2A]-[2A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	2	20	700	1940	24.47	24.5	-0.03
[2A]-2A-66C	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.04	0.01
2A-[2A]-66C	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.08	-0.03
2A-2A-[66C]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.15	-0.1
[2A]-[2A]-66C	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.05	0
[2A]-2A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	2	20	700	1940	24.47	24.41	0.06
2A-[2A]-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	2	20	700	1940	24.47	24.57	-0.1
2A-2A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	2	20	700	1940	24.47	24.37	0.1
[2A]-[2A]-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	2	20	700	1940	24.47	24.54	-0.07
[2C]-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	702	1940.2	66	20	66786	2145	66	20	66536	2120	24.05	24.11	-0.06
2C-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	702	1940.2	66	20	66786	2145	66	20	66536	2120	24.05	23.95	0.1
2C-[66A]-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	2	20	702	1940.2	66	20	66786	2145	66	20	66536	2120	24.05	23.96	0.09
[2C]-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	801	1950.1	2	20	999	1969.9	24.47	24.48	-0.01
2C-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	801	1950.1	2	20	999	1969.9	24.47	24.53	-0.06
2C-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	801	1950.1	2	20	999	1969.9	24.47	24.55	-0.08
[2A]-2A-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	71	10	68761	634.5	24.05	24.01	0.04
2A-[2A]-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	71	10	68761	634.5	24.05	24.07	-0.02
2A-2A-[66A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	71	10	68761	634.5	24.05	24.09	-0.04
[2A]-[2A]-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	71	10	68761	634.5	24.05	24.12	-0.07
[2A]-2A-[66A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	71	10	68761	634.5	24.05	23.96	0.09
2A-[2A]-[66A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	2	20	700	1940	66	20	66786	2145	71	10	68761	634.5	24.05	24.14	-0.09
[2A]-2A-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.47	24.4	0.07
2A-[2A]-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.47	24.54	-0.07
2A-2A-[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.47	24.41	0.06
[2A]-[2A]-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.47	24.55	-0.08
[2A]-2A-[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.47	24.4	0.07
2A-[2A]-[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	700	1940	71	10	68761	634.5	24.47	24.43	0.04
[2A]-2A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.33	24.42	-0.09
2A-[2A]-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.33	24.27	0.06
2A-2A-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.33	24.26	0.07
[2A]-[2A]-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.33	24.42	-0.09
[2A]-2A-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.33	24.42	-0.09
2A-[2A]-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	700	1940	66	20	66786	2145	24.33	24.23	0.1
[2A]-4A-4A-5A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.05	24.08	-0.03
2A-[4A]-4A-5A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.05	23.99	0.06
[2A]-[4A]-4A-5A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.05	24.08	-0.03
2A-[4A]-[4A]-5A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.05	24.11	-0.06
[2A]-4A-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.43	24.51	-0.08
2A-[4A]-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.43	24.49	-0.06
[2A]-[4A]-4A-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.43	24.35	0.08
2A-[4A]-[4A]-5A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	5	10	2525	881.5	24.43	24.35	0.08
[2A]-4A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	2	20	900	1960	24.12	24.2	-0.08
2A-[4A]-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	2	20	900	1960	24.12	24.15	-0.03
[2A]-[4A]-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	2	20	900	1960	24.12	24.16	-0.04
2A-[4A]-[4A]-5A	5	5	20625	846.5	2625	891.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	2	20	900	1960	24.12	24.14	-0.02
[2A]-4A-5B	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	5	10	2476	876.6	5	10	2575	886.5	24.05	23.97	0.08
2A-[4A]-5B	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	5	10	2476	876.6	5	10	2575	886.5	24.05	24.13	-0.08
[2A]-[4A]-5B	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	5	10	2476	876.6	5	10	2575	886.5	24.05	24.14	-0.09
[2A]-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2476	876.6	5	20	2575	886.5	24.43	24.43	0
2A-[4A]-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2476	876.6	5	20	2575	886.5	24.43	24.37	0.06
[2A]-[4A]-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	5	10	2476	876.6	5	20	2575	886.5	24.43	24.51	-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	24.12	24.2	-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	24.12	24.1	0.02
[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	24.12	24.16	-0.04

[2A]-4A-4A-12A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	20	2050	2120	12	10	5095	737.5	24.05	23.95	0.1
2A-[4A]-4A-12A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	20	2050	2120	12	10	5095	737.5	24.05	24.15	-0.1
[2A]-[4A]-4A-12A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	20	2050	2120	12	10	5095	737.5	24.05	24	0.05
2A-[4A]-[4A]-12A	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.05	24.05	0
[2A]-4A-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.43	24.44	-0.01
2A-[4A]-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.43	24.42	0.01
[2A]-[4A]-4A-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.43	24.44	-0.01
2A-[4A]-[4A]-12A	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	12	10	5095	737.5	24.43	24.5	-0.07
[2A]-4A-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	2	20	900	1960	24.24	24.17	0.07
2A-[4A]-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	2	20	900	1960	24.24	24.26	-0.02
[2A]-[4A]-4A-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	2	20	900	1960	24.24	24.2	0.04
2A-[4A]-[4A]-12A	12	5	23155	713.5	5155	743.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	2	20	900	1960	24.24	24.2	0.04
[2A]-4A-12B	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	12	5	5048	732.8	12	10	5120	740	24.05	23.95	0.1
2A-[4A]-12B	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	12	5	5048	732.8	12	10	5120	740	24.05	24.11	-0.06
[2A]-[4A]-12B	2	20	18900	1880	900	1960	QPSK	1	99	4	20	2175	2132.5	12	5	5048	732.8	12	10	5120	740	24.05	24.08	-0.03
[2A]-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5048	732.8	12	10	5120	740	24.43	24.4	0.03
2A-[4A]-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5048	732.8	12	10	5120	740	24.43	24.51	-0.08
[2A]-[4A]-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	2	20	900	1960	12	5	5048	732.8	12	10	5120	740	24.43	24.46	-0.03
[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	24.24	24.19	0.05
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	24.24	24.34	-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	24.24	24.14	0.1
[2A]-5B-66A	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2476	876.6	5	10	2575	886.5	66	20	66786	2145	24.05	23.95	0.1
2A-5B-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2476	876.6	5	10	2575	886.5	66	20	66786	2145	24.05	23.95	0.1
[2A]-5B-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2476	876.6	5	10	2575	886.5	66	20	66786	2145	24.05	24.01	0.04
[2A]-5B-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	24.12	24.09	0.03
2A-5B-[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	24.12	24.11	0.01
[2A]-5B-[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	24.12	24.12	0
[2A]-5B-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2476	876.6	5	10	2575	886.5	2	20	900	1960	24.47	24.49	-0.02
2A-5B-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2476	876.6	5	10	2575	886.5	2	20	900	1960	24.47	24.54	-0.07
[2A]-5B-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2476	876.6	5	10	2575	886.5	2	20	900	1960	24.47	24.43	0.04
[2A]-5A-46C	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	46	20	50692	5540.2	46	20	50890	5560	24.05	24.13	-0.08
[2A]-5A-46C	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	46	20	50692	5540.2	46	20	50890	5560	24.12	24.08	0.04
[2A]-5A-48C	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	48	20	55891	3615.1	48	20	56089	3634.9	24.05	24.14	-0.09
2A-5A-[48C]	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	48	20	55891	3615.1	48	20	56089	3634.9	24.05	24.14	-0.09
[2A]-5A-48C	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	48	20	56089	3634.9	24.12	24.21	-0.09
2A-5A-[48C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	48	20	56089	3634.9	24.12	24.11	0.01
[2A]-5A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	66	20	66536	2120	24.05	24.03	0.02
2A-5A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	66	20	66536	2120	24.05	24.11	-0.06
[2A]-5A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	66	20	66536	2120	24.05	23.96	0.09
2A-5A-[66A]-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	66	20	66536	2120	24.05	24.01	0.04
[2A]-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.12	24.05	0.07
2A-5A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.12	24.09	0.03
[2A]-5A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.12	24.12	0
2A-5A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.12	24.02	0.1
[2A]-5A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	24.47	24.56	-0.09
2A-5A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	24.47	24.57	-0.1
[2A]-5A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	24.47	24.55	-0.08
2A-5A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	24.47	24.46	0.01
[2A]-5A-66B	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	10	66837	2150.1	66	10	66936	2160	24.05	23.97	0.08
2A-5A-[66B]	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	10	66837	2150.1	66	10	66936	2160	24.05	23.97	0.08
[2A]-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	10	66837	2150.1	66	10	66936	2160	24.12	24.15	-0.03
2A-5A-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	2	20	900	1960	66	10	66837	2150.1	66	10	66936	2160	24.12	24.02	0.1
[2A]-5A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	5	10	2525	881.5	24.47	24.37	0.1
2A-5A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	5	10	2525	881.5	24.47	24.57	-0.1
[2A]-5A-66C	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	20	66787	2145.1	66	20	66985	2164.9	24.05	23.96	0.09
2A-5A-[66C]	2	20	18900	1880	900	1960	QPSK	1	99	5	10	2525	881.5	66	20	66787	2145.1	66	20	66985	2164.9	24.05	23.98	0.07
[2A]-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	12	66	20	66786	2145	66	20	66984	2164.8	2	20	900	1960	24.12	24.17	-0.05
2A-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	66	20	66786	2145	66	20	66984	2164.8	2	20	900	1960	24.12	24.2	-0.08
[2A]-5A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	5	10	2525	881.5	2	20	900	1960	24.47	24.42	0.05
2A-5A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	5	10	2525	881.5	2	20	900	1960	24.47	24.44	0.03
[2A]-12B-66A	2	20	18900	1880	900	1960	QPSK	1	99	12	5	5048	732.8	12	10	5120	740	66	20	66786	2145	24.05	24.08	-0.03
2A-12B-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	12	5	5048	732.8	12	10	5120	740	66	20	66786	2145	24.05	24.13	-0.08
[2A]-12B-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	12	5	5048	732.8	12	10	5120	740	66	20	66786	2145	24.05	24.11	-0.06
[2A]-12B-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	24.24	24.23	0.01
2A-12B-[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	24.24	24.33	-0.09
[2A]-12B-[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	24.24	24.18	0.06
[2A]-12B-66A	66	5	132322	1745	66786	2145	QPSK	1	12	12	5	5048	732.8	12	10	5120	740	2	20	900	1960	24.47	24.55	-0.08
2A-12B-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	12	5	5048	732.8	12	10	5120	740	2	20	900	1960	24.47	24.57	-0.1
[2A]-12B-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	12	5	5048	732.8	12	10	5120	740	2	20	900	1960	24.47	24.45	0.02
[2A]-12A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	66	20	66536	2120	24.05	24.08	-0.03

2A-12A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	66	20	66536	2120	24.05	23.98	0.07
[2A]-12A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	66	20	66536	2120	24.05	24.09	-0.04
2A-12A-[66A]-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	66	20	66536	2120	24.05	24.1	-0.05
[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	66536	2120	24.24	24.32	-0.08
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	66536	2120	24.24	24.33	-0.09
[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	66536	2120	24.24	24.16	0.08
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	66536	2120	24.24	24.2	0.04
[2A]-12A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.47	24.51	-0.04
2A-12A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.47	24.43	0.04
[2A]-12A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.47	24.41	0.06
2A-12A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	24.47	24.48	-0.01
[2A]-12A-66C	2	20	18900	1880	900	1960	QPSK	1	99	12	10	5095	737.5	66	20	66787	2145.1	66	20	66985	2164.9	24.05	23.96	0.09
2A-12A-[66C]	2	20	18900	1880	900	1960	QPSK	1	99	12	10	5095	737.5	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.13	-0.08
[2A]-12A-66C	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66787	2145.1	66	20	66985	2164.9	24.24	24.23	0.01
2A-12A-[66C]	12	5	23155	713.5	5155	743.5	QPSK	1	12	2	20	900	1960	66	20	66787	2145.1	66	20	66985	2164.9	24.24	24.32	-0.08
[2A]-12A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	12	10	5095	737.5	24.47	24.39	0.08
2A-12A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	12	10	5095	737.5	24.47	24.5	-0.03
[2A]-13A-46C	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	46	20	50692	5540.2	46	20	50890	5560	24.05	24.14	-0.09
[2A]-13A-46C	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	46	20	50692	5540.2	46	20	50890	5560	24.34	24.4	-0.06
[2A]-13A-48C	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	48	20	55891	3615.1	46	20	56089	3634.9	24.05	24.12	-0.07
[2A]-13A-48C	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	46	20	56089	3634.9	24.34	24.28	0.06
2A-13A-[48C]	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	48	20	55891	3615.1	46	20	56089	3634.9	24.05	24.03	0.02
2A-13A-[48C]	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	46	20	56089	3634.9	24.34	24.33	0.01
[2A]-13A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	20	66786	2145	66	20	66536	2120	24.05	24.01	0.04
2A-13A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	20	66786	2145	66	20	66536	2120	24.05	24.13	-0.08
[2A]-13A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	20	66786	2145	66	20	66536	2120	24.05	24.11	-0.06
2A-13A-[66A]-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	20	66786	2145	66	20	66536	2120	24.05	24.12	-0.07
[2A]-13A-66A-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.34	24.29	0.05
2A-13A-[66A]-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.34	24.44	-0.1
[2A]-13A-[66A]-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.34	24.37	-0.03
2A-13A-[66A]-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.34	24.42	-0.08
[2A]-13A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.47	24.49	-0.02
2A-13A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.47	24.4	0.07
[2A]-13A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.47	24.46	0.01
2A-13A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.47	24.47	0
[2A]-13A-66B	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	10	66837	2150.1	66	10	66936	2160	24.05	24.12	-0.07
2A-13A-[66B]	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	10	66837	2150.1	66	10	66936	2160	24.05	24.13	-0.08
[2A]-13A-66B	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	10	66837	2150.1	66	10	66936	2160	24.34	24.25	0.09
2A-13A-[66B]	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	10	66837	2150.1	66	10	66936	2160	24.34	24.31	0.03
[2A]-13A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	13	10	5230	751	24.47	24.54	-0.07
2A-13A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	2	20	900	1960	13	10	5230	751	24.47	24.53	-0.06
[2A]-13A-66C	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	20	66787	2145.1	66	20	66985	2164.9	24.05	23.96	0.09
2A-13A-[66C]	2	20	18900	1880	900	1960	QPSK	1	99	13	10	5230	751	66	20	66787	2145.1	66	20	66985	2164.9	24.05	24.03	0.02
[2A]-13A-66C	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	20	66787	2145.1	66	20	66985	2164.9	24.34	24.34	0
2A-13A-[66C]	13	5	23205	779.5	5205	748.5	QPSK	1	12	2	20	900	1960	66	20	66787	2145.1	66	20	66985	2164.9	24.34	24.33	0.01
[2A]-13A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	13	10	5230	751	24.47	24.45	0.02
2A-13A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	2	20	900	1960	13	10	5230	751	24.47	24.44	0.03
[2A]-14A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	14	10	5330	763	66	20	66786	2145	66	20	66536	2120	24.05	24.01	0.04
2A-14A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	14	10	5330	763	66	20	66786	2145	66	20	66536	2120	24.05	24.11	-0.06
[2A]-14A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	14	10	5330	763	66	20	66786	2145	66	20	66536	2120	24.05	24.06	-0.01
2A-14A-[66A]-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	14	10	5330	763	66	20	66786	2145	66	20	66536	2120	24.05	23.97	0.08
[2A]-14A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.55	24.56	-0.01
2A-14A-[66A]-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.55	24.51	0.04
[2A]-14A-[66A]-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.55	24.59	-0.04
2A-14A-[66A]-[66A]	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66536	2120	24.55	24.55	0
[2A]-14A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	14	10	5330	763	24.47	24.41	0.06
2A-14A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	14	10	5330	763	24.47	24.55	-0.08
[2A]-14A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	14	10	5330	763	24.47	24.51	-0.04
2A-14A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	14	10	5330	763	24.47	24.53	-0.06
[2A]-46A-46C	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	46	20	54142	5885.2	46	20	54340	5905	24.05	23.99	0.06
[2A]-46A-48C	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	48	20	55891	3615.1	48	20	56089	3634.9	24.05	24.08	-0.03
2A-46A-[48C]	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	48	20	55891	3615.1	48	20	56089	3634.9	24.05	23.96	0.09
[2A]-46A-66A-66A	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.05	24.01	0.04
2A-46A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.05	24.07	-0.02
[2A]-46A-[66A]-66A	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.05	24.11	-0.06
2A-46A-[66A]-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.05	24.13	-0.08
[2A]-46A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	46	20	46890	5160	24.47	24.48	-0.01
2A-46A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	46	20	46890	5160	24.47	24.37	0.1
[2A]-46A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	46	20	46890	5160	24.47	24.53	-0.06
2A-46A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66536	2120	2	20	900	1960	46	20	46890	5160	24.47	24.47	0
[2A]-46C-48A	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50692	5540.2	46	20	50890	5560	48	20	55340	3560	24.05	24.05	0
2A-46C-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50692	5540.2	46	20	50890	5560	48	20	55340	3560	24.05	24.11	-0.06
[2A]-46C-[48A]	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50692	5540.2	46	20	50890	5560	48	20	55340	3560	24.05	24.13	-0.08
[2A]-46C-66A	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50692	5540.2	46	20	50890	5560	66	20	66786	2145	24.05	24.07	-0.02
2A-46C-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50692	5540.2	46	20	50890	5560	66	20	66786	2145	24.05	23.96	0.09
[2A]-46C-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50692	5540.2	46	20	50890	5560	66	20	66786	2145	24.05	24.06	-0.01
[2A]-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50692	5540.2	46	20	50890	5560	24.47	24.4	0.07
2A-46C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50692	5540.2	46	20	50890	5560	24.47	24.47	0
[2A]-46C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50692	5540.2	46	20	50890	5560	24.47	24.37	0.1
[2A]-46D	2	20	18900	1880	900	1960	QPSK	1	99	46	20	50492	5520.2	46	20	50690	5540	46	20	50888	5559.8	24.05	24.13	-0.08
[2A]-48A-48C	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	55891	3615.1	48	20	56089	3634.9	24.05	24.15	-0.1
2A-[48A]-48C	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	55891	3615.1	48	20	56089	3634.9	24.05	23.98	0.07
2A-48A-[48C]	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	55891	3615.1	48	20	56089	3634.9	24.05	23.97	0.08
[2A]-[48A]-48C	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55340	3560	48	20	55891	3615.1	48	20	56089	3634.9	24.05	23.95	0.1
[2A]-48C-66A	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55891	3615.1	48	20	56089	3634.9	66	20	66786	2145	24.05	24	0.05
2A-[48C]-66A	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55891	3615.1	48	20	56089	3634.9	66	20	66786	2145	24.05	24.06	-0.01
2A-48C-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55891	3615.1	48	20	56089	3634.9	66	20	66786	2145	24.05	24.14	-0.09
[2A]-48C-[66A]	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55891	3615.1	48	20	56089	3634.9	66	20	66786	2145	24.05	24.03	0.02
[2A]-48C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	48	20	56089	3634.9	24.47	24.39	0.08
2A-[48C]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	48	20	56089	3634.9	24.47	24.49	-0.02
2A-48C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	48	20	56089	3634.9	24.47	24.5	-0.03

[2A]-48C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	48	20	55891	3615.1	48	20	56089	3634.9	24.47	24.52	-0.05
[2A]-48D	2	20	18900	1880	900	1960	QPSK	1	99	48	20	55792	3605.2	48	20	55990	3625	48	20	56188	3644.8	24.05	23.96	0.09
[2A]-66A-66B	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	15	67218	2188.2	66	5	67311	2197.5	24.05	24.08	-0.03
2A-[66A]-66B	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	15	67218	2188.2	66	5	67311	2197.5	24.05	24.11	-0.06
2A-66A-[66B]	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	15	67218	2188.2	66	5	67311	2197.5	24.05	23.97	0.08
[2A]-[66A]-66B	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	15	67218	2188.2	66	5	67311	2197.5	24.05	23.99	0.06
[2A]-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	66	20	67036	2170	2	20	900	1960	24.47	24.45	0.02
2A-[66A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	66	20	67036	2170	2	20	900	1960	24.47	24.42	0.05
2A-66A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	66	20	67036	2170	2	20	900	1960	24.47	24.4	0.07
[2A]-[66A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	66	20	67036	2170	2	20	900	1960	24.47	24.51	-0.04
[2A]-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	67218	2188.2	66	5	67311	2197.5	2	20	900	1960	24.47	24.55	-0.08
2A-[66A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	67218	2188.2	66	5	67311	2197.5	2	20	900	1960	24.47	24.49	-0.02
2A-66A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	67218	2188.2	66	5	67311	2197.5	2	20	900	1960	24.47	24.54	-0.07
[2A]-[66A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	67218	2188.2	66	5	67311	2197.5	2	20	900	1960	24.47	24.54	-0.07
2A-66A-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	20	66536	2120	71	10	68761	634.5	24.05	23.99	0.06
[2A]-66A-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	20	66536	2120	71	10	68761	634.5	24.05	24.08	-0.03
2A-[66A]-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	20	66536	2120	71	10	68761	634.5	24.05	24.13	-0.08
[2A]-[66A]-66A-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	20	66536	2120	71	10	68761	634.5	24.05	24.1	-0.05
2A-[66A]-[66A]-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66786	2145	66	20	66536	2120	71	10	68761	634.5	24.05	24.13	-0.08
2A-66A-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	71	10	68761	634.5	2	20	900	1960	24.47	24.5	-0.03
[2A]-66A-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	71	10	68761	634.5	2	20	900	1960	24.47	24.54	-0.07
2A-[66A]-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	71	10	68761	634.5	2	20	900	1960	24.47	24.46	0.01
[2A]-[66A]-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	71	10	68761	634.5	2	20	900	1960	24.47	24.53	-0.06
2A-[66A]-[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	71	10	68761	634.5	2	20	900	1960	24.47	24.46	0.01
2A-66A-66A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	66	20	66536	2120	66	20	67236	2190	2	20	900	1960	24.33	24.34	-0.01
[2A]-66A-66A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	66	20	66536	2120	66	20	67236	2190	2	20	900	1960	24.33	24.4	-0.07
2A-[66A]-66A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	66	20	66536	2120	66	20	67236	2190	2	20	900	1960	24.33	24.3	0.03
[2A]-[66A]-66A-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	66	20	66536	2120	66	20	67236	2190	2	20	900	1960	24.33	24.27	0.06
2A-[66A]-[66A]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	66	20	66536	2120	66	20	67236	2190	2	20	900	1960	24.33	24.33	0
[2A]-66C-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66787	2145.1	66	20	66985	2164.9	71	10	68761	634.5	24.05	24.13	-0.08
2A-[66C]-71A	2	20	18900	1880	900	1960	QPSK	1	99	66	20	66787	2145.1	66	20	66985	2164.9	71	10	68761	634.5	24.05	23.99	0.06
[2A]-66C-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66936	2160	71	10	68761	634.5	2	20	900	1960	24.47	24.43	0.04
2A-[66C]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66936	2160	71	10	68761	634.5	2	20	900	1960	24.47	24.45	0.02
[2A]-66C-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	2	20	900	1960	66	20	66536	2120	66	20	67236	2190	24.33	24.33	0
2A-[66C]-71A	71	5	133147	666.5	68621	620.5	QPSK	1	0	2	20	900	1960	66	20	66536	2120	66	20	67236	2190	24.33	24.38	-0.05
[4A]-4A-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	5	10	2476	876.6	5	10	2575	886.5	24.43	24.47	-0.04
4A-[4A]-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	5	10	2476	876.6	5	10	2575	886.5	24.43	24.46	-0.03
[4A]-[4A]-5B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	5	10	2476	876.6	5	10	2575	886.5	24.43	24.44	-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	24.12	24.14	-0.02
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	24.12	24.14	-0.02
[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	24.12	24.21	-0.09
[4A]-4A-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	12	5	5048	732.8	12	10	5120	740	24.43	24.42	0.01
4A-[4A]-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	12	5	5048	732.8	12	10	5120	740	24.43	24.4	0.03
[4A]-[4A]-12B	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	4	20	2050	2120	12	5	5048	732.8	12	10	5120	740	24.43	24.53	-0.1
[4A]-4A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	4	20	2050	2120	4	20	2300	2145	24.24	24.34	-0.1
4A-[4A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	4	20	2050	2120	4	20	2300	2145	24.24	24.34	-0.1
[4A]-[4A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	4	20	2050	2120	4	20	2300	2145	24.24	24.25	-0.01
[4A]-46A-46C	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	46890	5160	46	20	54142	5885.2	46	20	54340	5905	24.43	24.51	-0.08
[4A]-46D	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	46	20	53942	5865.2	46	20	54140	5885	46	20	54338	5904.8	24.43	24.48	-0.05
[4A]-48D	4	5	20175	1732.5	2175	2132.5	QPSK	1	12	48	20	55792	3605.2	48	20	55990	3625	48	20	56188	3644.8	24.43	24.53	-0.1
5A-5A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2525	881.5	66	20	66786	2145	66	20	66536	2120	24.12	24.11	0.01
5A-5A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2525	881.5	66	20	66786	2145	66	20	66536	2120	24.12	24.21	-0.09
5A-5A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	5	10	2450	874	5	10	2600	889	24.47	24.52	-0.05
5A-5A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	5	10	2450	874	5	10	2600	889	24.47	24.53	-0.06
5A-5A-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2525	881.5	66	10	66837	2150.1	66	10	66936	2160	24.12	24.14	-0.02
5A-5A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66911	2157.5	5	10	2450	874	5	10	2600	889	24.47	24.56	-0.09
5A-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.12	24.2	-0.08
5A-5A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66936	2160	5	10	2450	874	5	10	2600	889	24.47	24.42	0.05
5B-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	66	20	66786	2145	66	20	66536	2120	24.12	24.19	-0.07
5B-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	66	20	66786	2145	66	20	66536	2120	24.12	24.14	-0.02
5B-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	5	10	2450	874	5	10	2549	883.9	24.47	24.39	0.08
5B-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	5	10	2450	874	5	10	2549	883.9	24.47	24.38	0.09
5B-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	66	10	66837	2150.1	66	10	66936	2160	24.12	24.11	0.01
5B-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66911	2157.5	5	10	2476	876.6	5	10	2575	886.5	24.47	24.51	-0.04
5B-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	12	5	10	2553	884.3	66	20	66786	2145	66	20	66984	2164.8	24.12	24.15	-0.03
5B-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66936	2160	5	10	2476	876.6	5	10	2575	886.5	24.47	24.49	-0.02
5A-46C-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	46	20	54142	5885.2	46	20	54340	5905	66	20	66786	2145	24.12	24.07	0.05
5A-[48A]-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	66	20	66536	2120	24.12	24.19	-0.07
5A-48A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	66	20	66536	2120	24.12	24.06	0.06
5A-[48A]-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	66	20	66536	2120	24.12	24.07	0.05
5A-48A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55340	3560	66	20	66786	2145	66	20	66536	2120	24.12	24.2	-0.08
5A-[48C]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55891	3615.1	48	20	56089	3634.9	66	20	66786	2145	24.12	24.16	-0.04
5A-48C-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	12	48	20	55891	3615.1	48	20	56089	3634.9	66	20	66786	2145	24.12	24.11	0.01
12B-[66A]-66A	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	66	20	66786	2145	66	20	66536	2120	24.24	24.29	-0.05
12B-[66A]-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	12	12	5	5107	738.7	66	20	66786	2145	66	20	66536	2120	24.24	24.21	0.03
12B-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	12	5	5058	733.8	12	10	5130	741	24.47	24.51	-0.04
12B-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	12	5	5058	733.8	12	10	5130	741	24.47	24.45	0.02
13A-46A-[66A]-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.34	24.41	-0.07
13A-46A-[66A]-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.34	24.31	0.03
13A-46C-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	46	20	46890	5160	66	20	66786	2145	66	20	66536	2120	24.34	24.44	-0.1
13A-[48A]-48C	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	48	20	56442	3670.2	48	20	56640	3690	24.34	24.25	0.09
13A-48A-[48C]	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55340	3560	48	20	56442	3670.2	48	20	56640	3690	24.34	24.35	-0.01
13A-[48A]-66B	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55640	3690	66	10	66987	2165.1	66	10	67086	2175	24.34	24.43	-0.09
13A-48A-[66B]	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55640	3690	66	10	66987	2165.1	66	10	67086	2175	24.34	24.35	-0.01
13A-[48A]-66C	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55640	3690	66	20	67036	2170	66	20	67234	2189.8	24.34	24.29	0.05
13A-48A-[66C]	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	55640	3690	66	20	67036	2170	66	20	67234	2189.8	24.34	24.32	0.02
13A-[48C]-66A	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	56442	3670.2	48	20	56640	3690	48	20	55340	3560	24.34	24.3	0.04
13A-48C-[66A]	13	5	23205	779.5	5205	748.5	QPSK	1	12	48	20	56442	3670.2	48	20	56640	3690	48	20	55340	3560	24.34	24.32	0.02
13A-[66A]-66B	13	5	23205	779.5	5205	748.5	QPSK	1	12	66	20	66786	2145	66	15	67218	2188.2	66	5	67311	2197.5	24.34	24.38	-0.04
13A-66A-[66B]	13	5	23205	779.5	5205	748.5	QPSK	1	12	66	20	66786	2145	66	15	67218	2188.2	66	5	67311	2197.5	24.34	24.38	-0.04
13A-[66A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	66	20	67036	2170	13	10	5230	751	24.47	24.44	0.03
13A-66A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66693	2135.7	66	20	67036	2170	13	10	5230	751	24.47	24.42	0.05
13A-[66A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	67218	2188.2	66	5	67311	2197.5	13	10	5230	751	24.47	24.43	0.04
13A-66A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	67218	2188.2	66	5	67311	2197.5	13	10	5230	751	24.47	24.43	0.04
46A-46C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	46	20	54142	5885.2	46	20	54340	5905	24.47	24.48	-0.01
46A-[48C]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	48	20	56442	3670.2	48	20	56640	3690	24.47	24.42	0.05
46A-48C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46890	5160	48	20	56442	3670.2	48	20	56640	3690	24.47	24.56	-0.09
46C-[48A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	54142	5885.2	46	20	54340	5905	48	20	55340	3560	24.47	24.5	-0.03
46C-48A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	54142	5885.2	46	20	54340	5905	48	20	55340	3560	24.47	24.42	0.05
46C-[48A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	54142	5885.2	46	20	54340	5905	48	20	55340	3560	24.47	24.37	0.1
46C-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	46	20	54142	5885.2	46	20	54340	5905	24.47	24.55	-0.08
46C-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	46	20	54142	5885.2	46	20	54340	5905	24.47	24.42	0.05

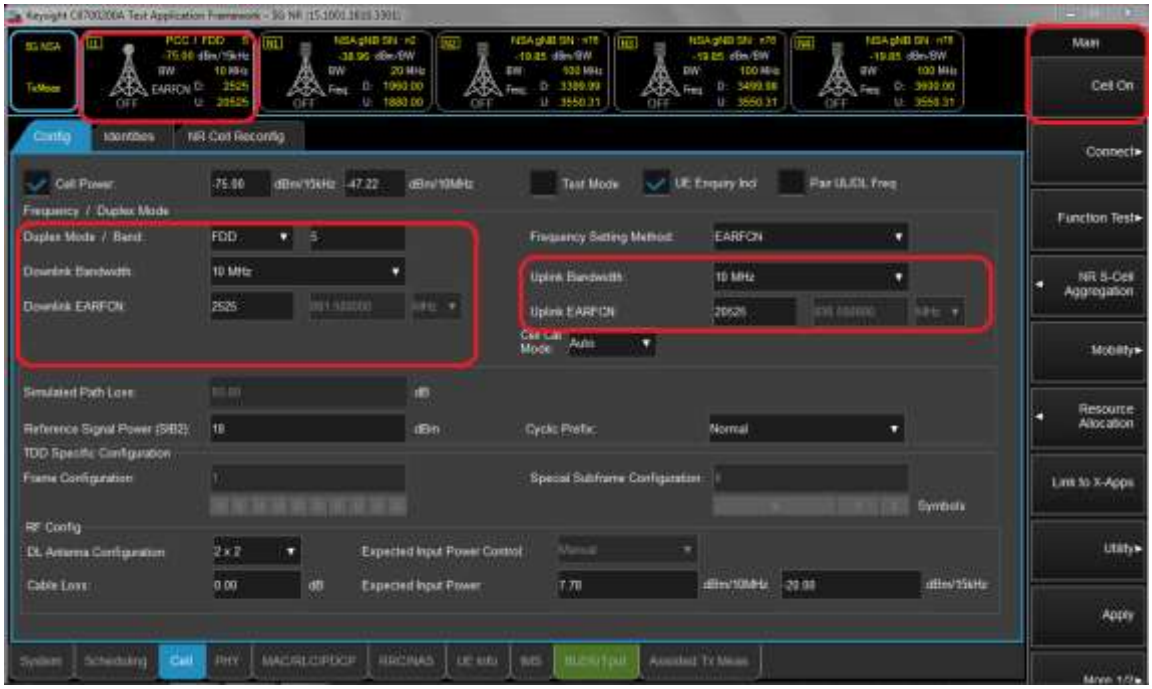
46D-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	46892	5160.2	46	20	47090	5180	46	20	47288	5199.8	24.47	24.55	-0.08
[48A]-48A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	56640	3690	24.47	24.43	0.04
48A-[48A]-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	56640	3690	24.47	24.51	-0.04
48A-48A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	56640	3690	24.47	24.4	0.07
[48A]-[48A]-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	56640	3690	24.47	24.55	-0.08
[48A]-48A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	56640	3690	24.47	24.56	-0.09
48A-[48A]-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	56640	3690	24.47	24.51	-0.04
48A-48A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	56640	3690	24.47	24.4	0.07
[48A]-48A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	48	20	55340	3560	48	20	56640	3690	24.47	24.48	-0.01
48A-[48A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	48	20	55340	3560	48	20	56640	3690	24.47	24.44	0.03
48A-48A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	48	20	55340	3560	48	20	56640	3690	24.47	24.39	0.08
[48A]-[48A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	48	20	55340	3560	48	20	56640	3690	24.47	24.53	-0.06
[48A]-48A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	48	20	55340	3560	48	20	56640	3690	24.47	24.55	-0.08
48A-[48A]-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	48	20	55340	3560	48	20	56640	3690	24.47	24.43	0.04
48A-48A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	48	20	55340	3560	48	20	56640	3690	24.47	24.52	-0.05
[48A]-[48A]-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	48	20	55340	3560	48	20	56640	3690	24.47	24.49	-0.02
[48A]-48C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	48	20	55340	3560	48	20	56442	3670.2	48	20	56640	3690	24.47	24.5	-0.03
48A-[48C]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	48	20	55340	3560	48	20	56442	3670.2	48	20	56640	3690	24.47	24.46	0.01
48A-48C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	48	20	55340	3560	48	20	56442	3670.2	48	20	56640	3690	24.47	24.51	-0.04
[48A]-48C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	48	20	55340	3560	48	20	56442	3670.2	48	20	56640	3690	24.47	24.43	0.04
[48A]-48D	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	56244	3650.4	48	20	56442	3670.2	48	20	56640	3690	22.51	22.48	0.03
[48A]-48D	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	55613	3587.3	48	20	55811	3607.1	48	20	56640	3690	22.51	22.5	0.01
[48C]-48C	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	55613	3587.3	48	20	56442	3670.2	48	20	56640	3690	22.51	22.51	0
48C-[48C]	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	55613	3587.3	48	20	56442	3670.2	48	20	56640	3690	22.51	22.58	-0.07
[48C]-48C	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	55613	3587.3	48	20	56442	3670.2	48	20	56640	3690	22.51	22.47	0.04
48C-[48C]	48	10	55757	3601.7	55757	3601.7	QPSK	1	49	48	20	55613	3587.3	48	20	56442	3670.2	48	20	56640	3690	22.51	22.52	-0.01
[48C]-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	55538	3579.8	24.47	24.44	0.03
48C-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	55538	3579.8	24.47	24.37	0.1
48C-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67036	2170	48	20	55340	3560	48	20	55538	3579.8	24.47	24.38	0.09
[48C]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	48	20	55340	3560	48	20	55538	3579.8	24.47	24.4	0.07
48C-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	10	66714	2137.8	48	20	55340	3560	48	20	55538	3579.8	24.47	24.52	-0.05
[48C]-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	48	20	55340	3560	48	20	55538	3579.8	24.47	24.52	-0.05
48C-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66669	2133.3	48	20	55340	3560	48	20	55538	3579.8	24.47	24.44	0.03
48D-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.47	24.45	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.

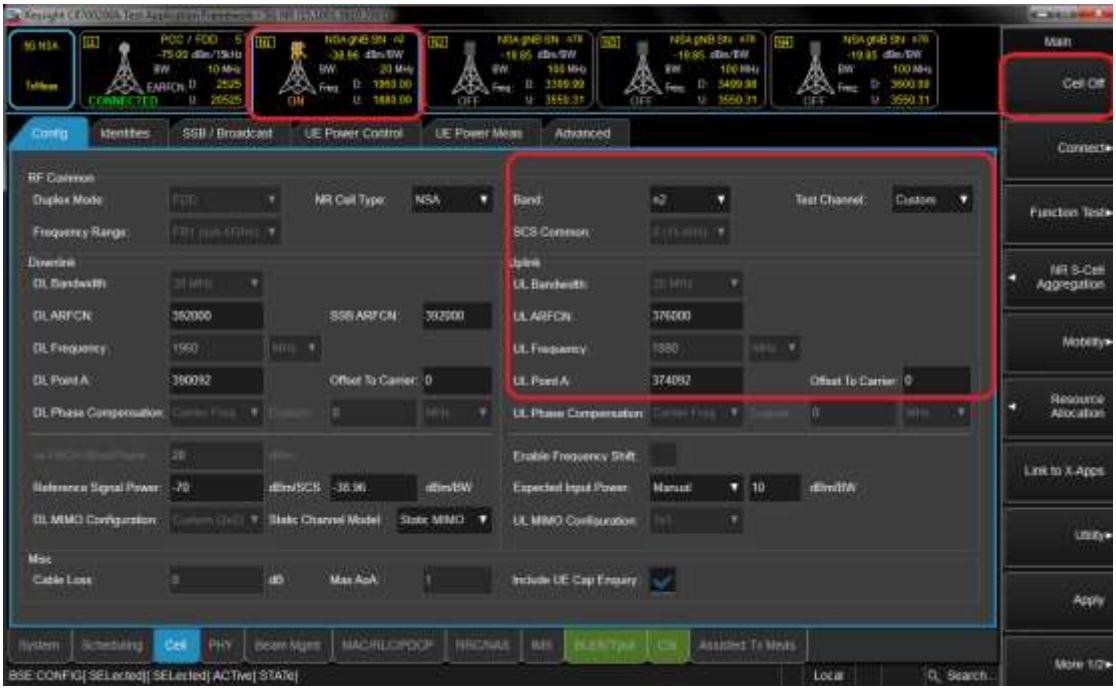


- Turn the Airplane Mode On and then turn the Airplane mode off.
- Select All down bits for UL Power control Mode in LTE.

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.

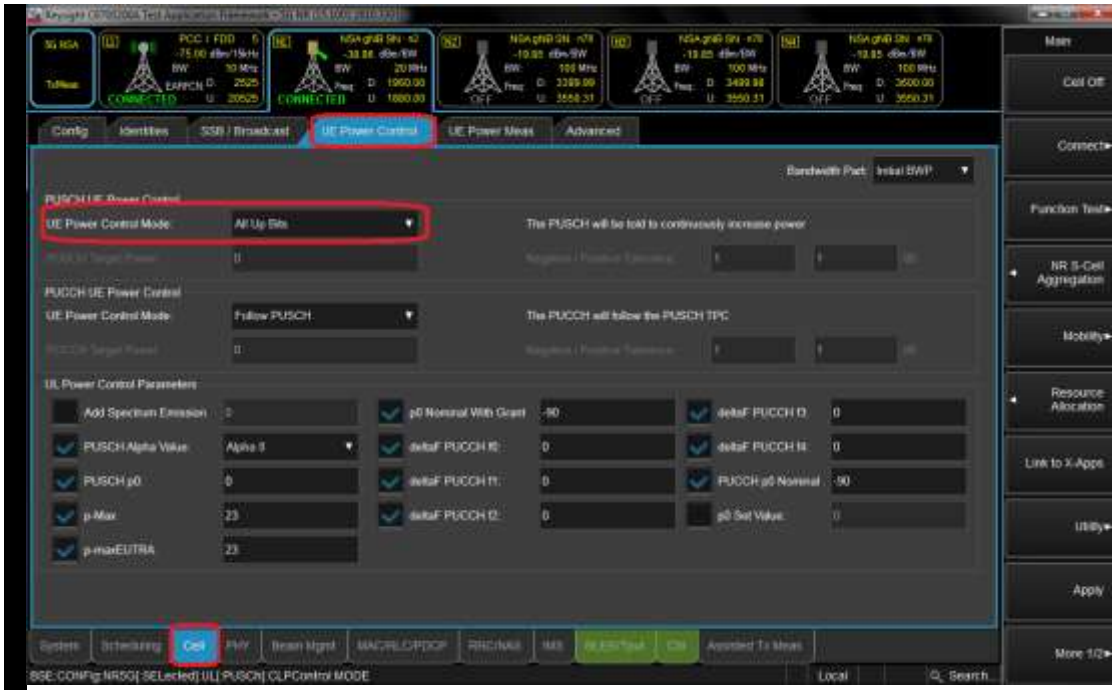


Connect NR S-Cell Aggregation

- 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”.