

### 1. LTE Downlink Carrier Aggregation configurations

1. DL Inter Band(2CC)									
E-UTRA CA configuration	Bandwidth Combination Set	E-UTRA Band	Bandwidth						Max Aggregated BW
			1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
2A-4A	(0)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	40
		Band 4			Yes	Yes	Yes	Yes	
	(1)	Band 2			Yes	Yes			20
		Band 4			Yes	Yes			
(2)	Band 2			Yes	Yes	Yes	Yes	40	
	Band 4			Yes	Yes	Yes	Yes		
2A-5A	(0)	Band 2			Yes	Yes	Yes	Yes	30
		Band 5			Yes	Yes			
	(1)	Band 2			Yes	Yes			20
		Band 5			Yes	Yes			
2A-12A	(0)	Band 2			Yes	Yes	Yes	Yes	40
		Band 12			Yes	Yes	Yes	Yes	
	(1)	Band 2			Yes	Yes	Yes	Yes	40
		Band 12		Yes	Yes	Yes			
(2)	Band 2			Yes	Yes			40	
	Band 12			Yes	Yes				
2A-13A	(0)	Band 2			Yes	Yes	Yes	Yes	30
		Band 13			Yes	Yes			
	(1)	Band 2			Yes	Yes			20
		Band 13			Yes	Yes			
(2)	Band 2			Yes	Yes	Yes	Yes	30	
	Band 13			Yes	Yes				
2A-17A	(0)	Band 2			Yes	Yes		20	
2A-66A	(0)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	40
		Band 66			Yes	Yes	Yes	Yes	
	(1)	Band 2			Yes	Yes			20
		Band 66			Yes	Yes			
(2)	Band 2			Yes	Yes	Yes	Yes	40	
	Band 66			Yes	Yes	Yes	Yes		
4A-5A	(0)	Band 4			Yes	Yes		20	
	Band 5			Yes	Yes				
(1)	Band 4			Yes	Yes	Yes	Yes	30	
	Band 5			Yes	Yes				
4A-12A	(0)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	20
		Band 12			Yes	Yes			
	(1)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 12			Yes	Yes			
	(2)	Band 4			Yes	Yes	Yes	Yes	30
		Band 12		Yes	Yes	Yes			
	(3)	Band 4			Yes	Yes			20
		Band 12			Yes	Yes			
(4)	Band 4			Yes	Yes	Yes	Yes	30	
	Band 12			Yes	Yes				
(5)	Band 4			Yes	Yes	Yes		20	
	Band 12			Yes	Yes				
4A-13A	(0)	Band 4			Yes	Yes	Yes	Yes	30
		Band 13			Yes	Yes			
(1)	Band 4			Yes	Yes			20	
	Band 13			Yes	Yes				
4A-17A	(0)	Band 4			Yes	Yes		20	
		Band 17			Yes	Yes			
5A-41A	(0)	Band 5			Yes	Yes		30	
		Band 41			Yes	Yes	Yes		
5A-66A	(0)	Band 5			Yes	Yes	Yes	30	
		Band 66			Yes	Yes	Yes		
12A-66A	(0)	Band 12			Yes	Yes		20	
		Band 66	Yes	Yes	Yes	Yes			
	(1)	Band 12			Yes	Yes		30	
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
	(2)	Band 12		Yes	Yes	Yes		30	
		Band 66			Yes	Yes	Yes	Yes	
	(3)	Band 12			Yes	Yes		20	
		Band 66			Yes	Yes			
(4)	Band 12			Yes	Yes		30		
	Band 66			Yes	Yes	Yes	Yes		
(5)	Band 12			Yes	Yes	Yes		20	
	Band 66			Yes	Yes	Yes			
26A-41A	(0)	Band 26			Yes	Yes	Yes	35	
		Band 41			Yes	Yes	Yes		

2. DL Inter Band(3CC)									
E-UTRA CA configuration	Bandwidth Combination Set	E-UTRA Band	Bandwidth						Max Aggregated BW
			1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
2A-4A-5A	(0)	Band 2			Yes	Yes	Yes	Yes	50
		Band 4			Yes	Yes	Yes	Yes	
		Band 5			Yes	Yes			
2A-4A-13A	(0)	Band 2			Yes	Yes	Yes	Yes	50
		Band 4			Yes	Yes	Yes	Yes	
		Band 13				Yes			
4A-4A-12A	(0)	Band 4	4A-4A BCS 0						50
5A-66A-66A	(0)	Band 12			Yes	Yes		50	
		Band 5			Yes	Yes			
		Band 66			66A-66A BCS 0				
26A-41C	(0)	Band 26			Yes	Yes	Yes	55	
		Band 41			41C BCS 1				
		Band 5			Yes	Yes			
12A-66A-66A	(0)	Band 66	66A-66A BCS 0						50

3. DL Intra Band(non-contiguous)									
E-UTRA CA configuration	Bandwidth Combination Set	E-UTRA Band	Allowed Channel BW Per Carrier (MHz)				Max Aggregated BW		
			1st Carrier	2nd Carrier	3rd Carrier	4th Carrier			
2A-2A	(0)	Band 2	5, 10, 15, 20	5, 10, 15, 20			40		
4A-4A	(0)	Band 4	5, 10, 15, 20	5, 10, 15, 20			40		
		Band 4	5, 10	5, 10			20		
41A-41A	(0)	Band 41	10, 15, 20	10, 15, 20			40		
		Band 41	5, 10, 15, 20	5, 10, 15, 20			40		
66A-66A	(0)	Band 66	5, 10, 15, 20	5, 10, 15, 20			40		
41A-41C	(0)	Band 41	5, 10, 15, 20	41C BCS 1			60		
		Band 41	41C BCS 1	5, 10, 15, 20					
41A-41D	(0)	Band 41	5, 10, 15, 20	41D BCS 0			80		
		Band 41	41D BCS 0	5, 10, 15, 20					
41C-41C	(0)	Band 41	41C BCS 0	41C BCS 0			80		

4. DL Intra Band(contiguous)									
E-UTRA CA configuration	Bandwidth Combination Set	E-UTRA Band	Allowed Channel BW Per Carrier (MHz)					Max Aggregated BW	
			1st Carrier	2nd Carrier	3rd Carrier	4th Carrier	5th Carrier		
2C	(0)	Band 2	5	20				40	
			10	15, 20					
			15	10, 15, 20					
41C	(0)	Band 41	10	20			40		
			15	15, 20					
			20	10, 15, 20					
	(1)	Band 41	5, 10	20			40		
			15	15, 20					
			20	10, 15, 20					
(2)	Band 41	10	15, 20			40			
		20	10, 15, 20						
		10	20						
(3)	Band 41	20	20			40			
		5	5, 10, 15						
		10	5, 10						
66B	(0)	Band 66	15	5			20		
			5	20					
			10	15, 20					
66C	(0)	Band 66	15	10, 15, 20			40		
			20	5, 10, 15, 20					
			10	20	15				
41D	(0)	Band 41	10	15, 20	20		60		
			15	20	10, 15				
			20	10, 15, 20	20				
			10	15, 20	10				
			20	10, 15, 20	15, 20				
			10	15, 20	15, 20				

**LTE Downlink Carrier Aggregation Combinations**

The DL CA power measurement conditions for various CC's combinations were determined according LTE DL CA SAR Test Exclusion guidance in TCB workshop note (April 2018). Only yellow highlighted cells need power measurement. The following power measurements were performed with a single carrier uplink; CA for this particular project only supports one (1) uplink and up to four (5) downlinks.

**LTE Release 10 Carrier Aggregation**

Index	2CC	Restriction	Completely Covered by Measurement Superset
2CC#1	2A-2A		
2CC#2	2C		
2CC#3	2A-4A		3CC#1
2CC#4	2A-5A		
2CC#5	2A-12A		
2CC#6	2A-13A		3CC#2
2CC#7	2A-17A		
2CC#8	2A-66A		
2CC#9	4A-4A		
2CC#10	4A-5A		
2CC#11	4A-12A		
2CC#12	4A-13A		
2CC#13	4A-17A		
2CC#14	5A-41A	41A SCC Only	
2CC#15	5A-66A		
2CC#16	12A-66A		
2CC#17	26A-41A	41A SCC Only	
2CC#18	41A-41A		
2CC#19	41C		4CC#2
2CC#20	66A-66A		
2CC#21	66B		
2CC#22	66C		

Index	3CC	Restriction	Completely Covered by Measurement Superset
3CC#1	4A-2A-5A		
3CC#2	4A-2A-13A		
3CC#3	4A-4A-12A		
3CC#4	5A-66A-66A		
3CC#5	12A-66A-66A		
3CC#6	26A-41C	41C SCC Only	
3CC#7	41A-41C		
3CC#8	41D		4CC#1

Index	4CC	Restriction	Completely Covered by Measurement Superset
4CC#1	41A-41D		
4CC#2	41C-41C		

**Note:**

Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).

**LTE Release 10 Carrier Aggregation with 4x4 MIMO**

Index	2CC	Restriction	Completely Covered by Measurement Superset
2CC#1	2A-[4A]		3CC#1
2CC#2	2A-[66A]		
2CC#3	[4A]-4A		3CC#3
2CC#4	[4A]-[4A]		3CC#5
2CC#5	[4A]-5A		
2CC#6	[4A]-12A		
2CC#7	[4A]-13A		
2CC#8	[4A]-17A		
2CC#9	5A-[41A]	41A SCC Only	
2CC#10	5A-[66A]		
2CC#11	12A-[66A]		
2CC#12	26A-[41A]	41A SCC Only	
2CC#13	41A-[41A]		
2CC#14	[41A]-[41A]		
2CC#15	[41C]		3CC#12
2CC#16	66A-[66A]		3CC#6
2CC#17	[66A]-[66A]		3CC#7
2CC#18	[66B]		
2CC#19	[66C]		

Index	3CC	Restriction	Completely Covered by Measurement Superset
3CC#1	2A-[4A]-5A		
3CC#2	2A-[4A]-13A		
3CC#3	4A-[4A]-12A		
3CC#4	[4A]-4A-12A		
3CC#5	[4A]-[4A]-12A		
3CC#6	5A-66A-[66A]		
3CC#7	5A-[66A]-[66A]		
3CC#8	12A-66A-[66A]		
3CC#9	12A-[66A]-66A		
3CC#10	12A-[66A]-[66A]		
3CC#11	26A-[41C]	41C SCC Only	
3CC#12	41A-[41C]		
3CC#13	[41A]-41C		
3CC#14	[41A]-[41C]		
3CC#15	[41D]		

Index	4CC	Restriction	Completely Covered by Measurement Superset
4CC#1	[41A]-41D		

**Note:**  
Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).

**Single Carrier Downlink 4x4 MIMO output power results**

LTE Bands	Modulation	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	LTE Rel 8 Tx. Power [dBm]	DL 4x4 MIMO Tx. Power [dBm]	Delta
Band 4	QPSK	20	20175	1732.5	1/49	22.3	22.4	0.05
Band 41	QPSK	20	39750	2506	1/99	22.9	22.9	-0.06
Band 66	QPSK	20	132072	1720	1/49	22.5	22.6	0.15

**Note:**  
According to LTE Test Conditions in TCB workshop (May, 2017), SAR is excluded for LTE downlink 4x4 MIMO operation when uplink output with DL MIMO does not exceed highest uplink output power configuration without DL MIMO by more than 1/4 dB. And for DL MIMO with carrier aggregation, the same SAR test exclusion procedure is considered.

## DL CA output power results

E-UTRA CA configuration (BCS)	Bands					UL					DL												LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power	Delta				
	PCC	SCC1	SCC2	SCC3	SCC4	PCC					SCC1			SCC2			SCC3			SCC4									
	1st	2nd	3rd	4th	5th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offs et	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)				BW (MHz)	Channel	Freq. (MHz)	
2A-2A	2A	2A				QPSK	20	18700	1860	1/0	20	700	1940	20	1100	1980											21.94	21.98	0.04
2C	2C	2C				QPSK	20	18700	1860	1/0	20	700	1940	20	898	1959.8											21.94	22.01	0.07
2A-5A	2A	5A				QPSK	20	18700	1860	1/0	20	700	1940	10	2525	881.5											21.94	21.99	0.05
	5A	2A				QPSK	10	20525	836.5	1/0	10	2525	881.5	20	900	1960											23.91	23.97	0.06
2A-12A	2A	12A				QPSK	20	18700	1860	1/0	20	700	1940	10	5095	737.5											21.94	21.95	0.01
	12A	2A				QPSK	10	23095	707.5	1/49	10	5095	737.5	20	900	1960											23.22	23.30	0.08
2A-17A	2A	17A				QPSK	10	18900	1880	1/25	10	700	1940	10	5790	740											22.10	22.12	0.02
	17A	2A				QPSK	10	23790	710	1/49	10	5790	740	10	900	1960											23.32	23.42	0.10
2A-66A	2A	66A				QPSK	20	18700	1860	1/0	20	700	1940	20	66786	2145											21.94	22.00	0.06
	66A	2A				QPSK	20	132072	1720	1/49	20	2120	66536	20	900	1960											22.49	22.56	0.07
4A-4A	4A	4A				QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	2350	2150											22.31	22.32	0.01
4A-5A	4A	5A				QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	2525	881.5											22.31	22.38	0.07
	5A	4A				QPSK	10	20525	836.5	1/0	10	2525	881.5	20	2175	2132.5											23.91	24.01	0.10
4A-12A	4A	12A				QPSK	10	20350	1750	1/25	10	2350	2150	10	5095	737.5											22.51	22.59	0.08
	12A	4A				QPSK	10	23095	707.5	1/49	10	5095	737.5	10	2175	2132.5											23.22	23.31	0.09
4A-13A	4A	13A				QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	5230	751											22.31	22.37	0.06
	13A	4A				QPSK	10	23230	782	1/25	10	5230	751	20	2175	2132.5											23.61	23.70	0.09
4A-17A	4A	17A				QPSK	10	20350	1750	1/25	10	2350	2150	10	5790	740											22.51	22.54	0.03
	17A	4A				QPSK	10	23790	710	1/49	10	5790	740	10	2175	2132.5											23.32	23.39	0.07
5A-41A	5A	41A				QPSK	10	20525	836.5	1/0	10	2525	881.5	20	40620	2593											23.91	23.92	0.01
5A-66A	5A	66A				QPSK	10	20525	836.5	1/0	10	2525	881.5	20	66786	2145											23.91	23.97	0.06
	66A	5A				QPSK	20	132072	1720	1/49	20	66536	2120	10	2525	881.5											22.49	22.56	0.07
12A-66A	12A	66A				QPSK	10	23095	707.5	1/49	10	5095	737.5	20	66786	2145											23.22	23.27	0.05
	66A	12A				QPSK	20	132072	1720	1/49	20	66536	2120	10	5095	737.5											22.49	22.51	0.02
26A-41A	26A	41A				QPSK	15	26865	831.5	1/37	15	8865	876.5	20	40620	2593											23.70	23.71	0.01
41A-41A	41A	41A				QPSK	20	39750	2506	1/99	20	39750	2506	20	41490	2680											22.93	23.01	0.08
66A-66A	66A	66A				QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170											22.49	22.56	0.07
66B	66B	66B				QPSK	15	132322	1745	1/37	15	66786	2145	5	66879	2154.3											22.44	22.50	0.06
66C	66C	66C				QPSK	20	132072	1720	1/49	20	66536	2120	20	66734	2139.8											22.49	22.51	0.02
4A-2A-5A	4A	2A	5A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	20	900	1960	10	2525	881.5								22.31	22.34	0.03
	2A	4A	5A			QPSK	20	18700	1860	1/0	20	700	1940	20	2175	2132.5	10	2525	881.5								21.94	22.00	0.06
	5A	2A	4A			QPSK	10	20525	836.5	1/0	10	2525	881.5	20	900	1960	20	2175	2132.5								23.91	23.98	0.07
4A-2A-13A	4A	2A	13A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	20	900	1960	10	5230	751								22.31	22.35	0.04
	2A	13A	4A			QPSK	20	18700	1860	1/0	20	700	1940	10	5230	751	20	2175	2132.5								21.94	22.01	0.07
	13A	2A	4A			QPSK	10	23230	782	1/25	10	5230	751	20	900	1960	20	2175	2132.5								23.61	23.64	0.03
4A-4A-12A	4A	4A	12A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	2350	2150	10	5095	737.5								22.31	22.41	0.10
	12A	4A	4A			QPSK	10	23095	707.5	1/49	10	5095	737.5	20	2175	2132.5	10	2350	2150								23.22	23.25	0.03
5A-66A-66A	5A	66A	66A			QPSK	10	20525	836.5	1/0	10	2525	881.5	20	66536	2120	20	67036	2170								23.91	23.96	0.05
	66A	66A	5A			QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170	10	2525	881.5								22.49	22.58	0.09
12A-66A-66A	12A	66A	66A			QPSK	10	23095	707.5	1/49	10	5095	737.5	20	66536	2120	20	67036	2170								23.22	23.27	0.05
	66A	66A	12A			QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170	10	5095	737.5								22.49	22.58	0.09
26A-41C	26A	41C	41C			QPSK	15	26865	831.5	1/37	15	8865	876.5	20	40620	2593	20	40818	2612.8								23.70	23.75	0.05
41A-41C	41A	41C	41C			QPSK	20	39750	2506	1/99	20	39750	2506	20	41490	2680	20	41292	2660.2								22.93	22.95	0.02
	41C	41C	41A			QPSK	20	39750	2506	1/99	20	39750	2506	20	39948	2525.8	20	41490	2680								22.93	22.98	0.05
41D	41D	41D	41D			QPSK	20	39750	2506	1/99	20	39750	2506	20	39948	2525.8	20	40146	2545.6								22.93	22.97	0.04
41A-41D	41A	41D	41D	41D		QPSK	20	39750	2506	1/99	20	39750	2506	20	41490	2680	20	41292	2660.2	20	41094	2640.4					22.93	22.98	0.05
	41D	41D	41D	41A		QPSK	20	39750	2506	1/99	20	39750	2506	20	39948	2525.8	20	40146	2545.6	20	41490	2680					22.93	22.99	0.06
41C-41C	41C	41C	41C	41C		QPSK	20	39750	2506	1/99	20	39750	2506	20	39948	2525.8	20	41490	2680	20	41292	2660.2					22.93	22.95	0.02

## Note:

- Per KDB 941225 D05A LTE Rel. 10 KDB Inquiry Sheet: SAR is excluded for Carrier Aggregation when measured power does not exceed LTE Release 8 by more than a 1/4 dB.
- When the same frequency band is used for both contiguous and non-contiguous in DL CA Intra band, power was measured using the configuration with the largest aggregated bandwidth and maximum output power among the contiguous and non-contiguous in DL CA Intra band configurations.

DL CA with 4x4 MIMO output power results

E-UTRA CA configuration (BCS)	Bands					UL					DL												LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power	Delta						
	PCC	SCC1	SCC2	SCC3	SCC4	PCC					PCC			SCC1			SCC2			SCC3						SCC4					
	1st	2nd	3rd	4th	5th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offsets	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)				BW (MHz)	Channel	Freq. (MHz)	BW (MHz)	Channel	Freq. (MHz)
2A-[66A]	2A	[66A]				QPSK	20	18700	1860	1/0	20	700	1940	20	66786	2145													21.94	21.95	0.01
	[66A]	2A				QPSK	20	132072	1720	1/49	20	66536	2120	20	900	1960												22.49	22.56	0.07	
[4A]-5A	[4A]	5A				QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	2525	881.5												22.31	22.35	0.04	
	5A	[4A]				QPSK	10	20525	836.5	1/0	10	2525	881.5	20	2175	2132.5												23.91	24.00	0.09	
[4A]-12A	[4A]	12A				QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	5095	737.5												22.31	22.40	0.09	
	12A	[4A]				QPSK	10	23095	707.5	1/49	10	5095	737.5	20	2175	2132.5												23.22	23.31	0.09	
[4A]-13A	[4A]	13A				QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	5230	751												22.31	22.35	0.04	
	13A	[4A]				QPSK	10	23230	782	1/25	10	5230	751	20	2175	2132.5												23.61	23.68	0.07	
[4A]-17A	[4A]	17A				QPSK	10	20350	1750	1/25	10	2350	2150	10	5790	740												22.51	22.52	0.01	
	17A	[4A]				QPSK	10	23790	710	1/49	10	5790	740	10	2175	2132.5												23.32	23.38	0.06	
5A-[41A]	5A	[41A]				QPSK	10	20525	836.5	1/0	10	2525	881.5	20	40620	2593												23.91	23.98	0.07	
5A-[66A]	5A	[66A]				QPSK	10	20525	836.5	1/0	10	2525	881.5	20	66786	2145												23.91	23.97	0.06	
	[66A]	5A				QPSK	20	132072	1720	1/49	20	66536	2120	10	2525	881.5												22.49	22.50	0.01	
12A-[66A]	12A	[66A]				QPSK	10	23095	707.5	1/49	10	5095	737.5	20	66786	2145												23.22	23.27	0.05	
	[66A]	12A				QPSK	20	132072	1720	1/49	20	66536	2120	10	5095	737.5												22.49	22.58	0.09	
26A-[41A]	26A	[41A]				QPSK	15	26865	831.5	1/37	15	8865	876.5	20	40620	2593												23.70	23.80	0.10	
41A-[41A]	41A	[41A]				QPSK	20	39750	2506	1/99	20	39750	2506	20	41490	2680												22.93	23.00	0.07	
	[41A]	41A				QPSK	20	39750	2506	1/99	20	39750	2506	20	41490	2680												22.93	22.96	0.03	
[41A]-[41A]	[41A]	[41A]				QPSK	20	39750	2506	1/99	20	39750	2506	20	41490	2680												22.93	23.01	0.08	
[66B]	[66B]	[66B]				QPSK	15	132322	1745	1/37	15	66786	2145	5	66879	2154.3												22.44	22.48	0.04	
[66C]	[66C]	[66C]				QPSK	20	132072	1720	1/49	20	66536	2120	20	66734	2139.8												22.49	22.54	0.05	
2A-[4A]-5A	2A	[4A]	5A			QPSK	20	18700	1860	1/0	20	700	1940	20	2175	2132.5	10	2525	881.5									21.94	22.00	0.06	
	[4A]	2A	5A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	20	900	1960	10	2525	881.5									22.31	22.37	0.06	
2A-[4A]-13A	5A	[4A]	2A			QPSK	10	20525	836.5	1/0	10	2525	881.5	20	2175	2132.5	20	900	1960									23.91	24.01	0.10	
	2A	[4A]	13A			QPSK	20	18700	1860	1/0	20	700	1940	20	2175	2132.5	10	5230	751									21.94	21.96	0.02	
4A-[4A]-12A	[4A]	2A	13A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	20	900	1960	10	5230	751									22.31	22.33	0.02	
	13A	[4A]	2A			QPSK	10	23230	782	1/25	10	5230	751	20	2175	2132.5	20	900	1960									23.61	23.71	0.10	
[4A]-[4A]-12A	4A	[4A]	12A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	2350	2150	10	5095	737.5									22.31	22.37	0.06	
	[4A]	12A	4A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	5095	737.5	10	2350	2150									22.31	22.36	0.05	
[4A]-4A-12A	12A	[4A]	4A			QPSK	10	23095	707.5	1/49	10	5095	737.5	20	2175	2132.5	10	2350	2150									23.22	23.29	0.07	
	[4A]	4A	12A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	2350	2150	10	5095	737.5									22.31	22.32	0.01	
[4A]-[4A]-12A	4A	[4A]	12A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	2350	2150	10	5095	737.5									22.31	22.32	0.01	
	12A	[4A]	4A			QPSK	10	23095	707.5	1/49	10	5095	737.5	20	2175	2132.5	10	2350	2150									23.22	23.29	0.07	
[4A]-[4A]-12A	[4A]	[4A]	12A			QPSK	20	20175	1732.5	1/49	20	2175	2132.5	10	2350	2150	10	5095	737.5									22.31	22.40	0.09	
	12A	[4A]	[4A]			QPSK	10	23095	707.5	1/49	10	5095	737.5	20	2175	2132.5	10	2350	2150									23.22	23.31	0.09	
5A-66A-[66A]	5A	[66A]	66A			QPSK	10	20525	836.5	1/0	10	2525	881.5	20	66536	2120	20	67036	2170									23.91	23.93	0.02	
	[66A]	[66A]	5A			QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170	10	2525	881.5									22.49	22.55	0.06	
5A-[66A]-[66A]	[66A]	[66A]	5A			QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170	10	2525	881.5									22.49	22.53	0.04	
	5A	[66A]	[66A]			QPSK	10	20525	836.5	1/0	10	2525	881.5	20	66536	2120	20	67036	2170									23.91	24.00	0.09	
12A-66A-[66A]	[66A]	[66A]	5A			QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170	10	2525	881.5									22.49	22.54	0.05	
	12A	[66A]	66A			QPSK	10	23095	707.5	1/49	10	5095	737.5	20	66536	2120	20	67036	2170									23.22	23.27	0.05	
12A-[66A]-[66A]	66A	[66A]	12A			QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170	10	5095	737.5									22.49	22.57	0.08	
	[66A]	66A	12A			QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170	10	5095	737.5									22.49	22.58	0.09	
26A-[41C]	12A	[66A]	[66A]			QPSK	10	23095	707.5	1/49	10	5095	737.5	20	66536	2120	20	67036	2170									23.22	23.25	0.03	
	[66A]	[66A]	12A			QPSK	20	132072	1720	1/49	20	66536	2120	20	67036	2170	10	5095	737.5									22.49	22.52	0.03	
41A-[41C]	26A	[41C]	[41C]			QPSK	15	26865	831.5	1/37	15	8865	876.5	20	40620	2593	20	40818	2612.8								23.70	23.73	0.03		
	41A	[41C]	[41C]			QPSK	20	39750	2506	1/99	20	39750	2506	20	41490	2680	20	41292</													