

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	Yes	Yes	
		Band 2	Yes	Yes	Yes	Yes	Yes	Yes	20
	(1)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	40
		Band 2	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 4	Yes	Yes	Yes	Yes	Yes	Yes	20
2A-5A	(0)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 5	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 2	Yes	Yes	Yes	Yes	Yes	Yes	20
2A-12A	(0)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 2	Yes	Yes	Yes	Yes	Yes	Yes	
2A-17A	(0)	Band 17	Yes	Yes	Yes	Yes	Yes	20	
2A-66A	(0)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	40
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 2	Yes	Yes	Yes	Yes	Yes	Yes	20
	(1)	Band 66	Yes	Yes	Yes	Yes	Yes	Yes	40
		Band 2	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	20
4A-5A	(0)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	20
		Band 71	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 4	Yes	Yes	Yes	Yes	Yes	Yes	30
	(1)	Band 5	Yes	Yes	Yes	Yes	Yes	Yes	40
		Band 2	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 5	Yes	Yes	Yes	Yes	Yes	Yes	20
4A-12A	(0)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	20
		Band 12	Yes	Yes	Yes	Yes	Yes	Yes	
	(1)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 12	Yes	Yes	Yes	Yes	Yes	Yes	
	(2)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 12	Yes	Yes	Yes	Yes	Yes	Yes	
	(3)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	20
		Band 12	Yes	Yes	Yes	Yes	Yes	Yes	
	(4)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 12	Yes	Yes	Yes	Yes	Yes	Yes	
(5)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	20	
	Band 12	Yes	Yes	Yes	Yes	Yes	Yes		
4A-13A	(0)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 13	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 4	Yes	Yes	Yes	Yes	Yes	Yes	20
4A-17A	(0)	Band 4	Yes	Yes	Yes	Yes	Yes	Yes	20
		Band 17	Yes	Yes	Yes	Yes	Yes	Yes	
5A-41A	(0)	Band 5	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 41	Yes	Yes	Yes	Yes	Yes	Yes	
5A-66A	(0)	Band 5	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 12	Yes	Yes	Yes	Yes	Yes	Yes	20
12A-66A	(0)	Band 12	Yes	Yes	Yes	Yes	Yes	Yes	20
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
	(1)	Band 12	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
	(2)	Band 12	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
	(3)	Band 12	Yes	Yes	Yes	Yes	Yes	Yes	20
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
	(4)	Band 12	Yes	Yes	Yes	Yes	Yes	Yes	30
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
(5)	Band 12	Yes	Yes	Yes	Yes	Yes	Yes	20	
	Band 66	Yes	Yes	Yes	Yes	Yes	Yes		
26A-41A	(0)	Band 26	Yes	Yes	Yes	Yes	Yes	Yes	35
		Band 41	Yes	Yes	Yes	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	Yes	Yes	50
		Band 4	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 5	Yes	Yes	Yes	Yes	Yes	Yes	
2A-4A-13A	(0)	Band 2	Yes	Yes	Yes	Yes	Yes	Yes	50
		Band 4	Yes	Yes	Yes	Yes	Yes	Yes	
		Band 13	Yes	Yes	Yes	Yes	Yes	Yes	
4A-4A-12A	(0)	Band 4	4A-4A BCS 0						50
		Band 12	Yes	Yes	Yes	Yes	Yes	Yes	
4A-4A-17A	(0)	Band 4	4A-4A BCS 0						60
		Band 17	Yes	Yes	Yes	Yes	Yes	Yes	
5A-66A-66A	(0)	Band 5	66A-66A BCS 0						50
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
12A-66A-66A	(0)	Band 12	Yes	Yes	Yes	Yes	Yes	Yes	50
		Band 66	66A-66A BCS 0						
		Band 66	Yes	Yes	Yes	Yes	Yes	Yes	
26A-41C	(0)	Band 26	Yes	Yes	Yes	Yes	Yes	Yes	55
		Band 41	41C BCS 1						

4. 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	
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
41A-41C	(0)	Band 41	41C BCS 1			60
		Band 41	5, 10, 15, 20	5, 10, 15, 20		
41A-41D	(0)	Band 41	15, 20	BCS 0		80
		Band 41	41D BCS 0	5, 10, 15, 20		
41C-41C	(0)	Band 41	41C BCS 1			80
41C-41D	(0)	Band 41	41C BCS 0	41D BCS 0		100
66A-66A	(0)	Band 66	5, 10, 15, 20	5, 10, 15, 20		40

8. 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	
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	5, 10, 15, 20			
(2)	Band 41	10	15, 20			40	
		15	10, 15, 20				
		20	10, 15, 20				
(3)	Band 41	10	20			40	
		20	20				
		20	20				
41D	(0)	Band 41	10	20	15		60
			10	15, 20	20		
			15	20	10, 15		
			15	10, 15, 20	20		
			20	15, 20	10		
			20	10, 15, 20	15, 20		
41E	(0)	Band 41	15, 20	15, 20	15, 20	20	80
66B	(0)	Band 66	5	5, 10, 15			20
			10	5, 10			
			15	5			
66C	(0)	Band 66	5	20			40
			10	15, 20			
			15	10, 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		3CC#1
2CC#5	2A-12A		
2CC#6	2A-13A		3CC#2
2CC#7	2A-17A		
2CC#8	2A-66A		
2CC#9	4A-4A		3CC#3
2CC#10	4A-5A		3CC#1
2CC#11	4A-12A		3CC#3
2CC#12	4A-13A		3CC#2
2CC#13	4A-17A	B17 SCC Only	3CC#4
2CC#14	5A-41A	B41 SCC Only	
2CC#15	5A-66A		3CC#5
2CC#16	12A-66A		3CC#6
2CC#17	26A-41A	B41 SCC Only	
2CC#18	41A-41A		
2CC#19	41C		3CC#7
2CC#20	66A-66A		3CC#6
2CC#21	66B		
2CC#22	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-17A	B17 SCC Only	
3CC#5	5A-66A-66A		
3CC#6	12A-66A-66A		
3CC#7	26A-41C	B41 SCC Only	
3CC#8	41A-41C		
3CC#9	41D		4CC#2

Index	4CC	Restriction	Completely Covered by Measurement Superset
4CC#1	41A-41D		
4CC#2	41C-41C		
4CC#3	41E		

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]-5A		3CC#1
2CC#5	[4A]-12A		3CC#3
2CC#6	[4A]-13A		3CC#2
2CC#7	[4A]-17A	B17 SCC Only	3CC#4
2CC#8	5A-[41A]	B41 SCC Only	
2CC#9	5A-[66A]		3CC#5
2CC#10	12A-[66A]		3CC#6
2CC#11	26A-[41A]	B41 SCC Only	
2CC#12	[41A]-[41A]		
2CC#13	[41C]		4CC#2
2CC#14	[66A]-[66A]		3CC#5

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]-17A	B17 SCC Only	
3CC#5	5A-[66A]-[66A]		
3CC#6	12A-[66A]-[66A]		
3CC#7	26A-[41C]	B41 SCC Only	
3CC#8	[41A]-[41C]		
3CC#9	[41D]		

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

Note:

Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April.2018).
[*] is 4X4 MIMO configuration.

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	1/99	23.3	23.5	0.13
Band 41	QPSK	20	40620	2593	1/99	23.9	23.8	-0.12
Band 66	QPSK	20	132572	1770	1/49	23.3	23.1	-0.14

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

Bands							UL								DL								LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power	Delta						
SCC1	SCC2	SCC3	SCC4	SCC5	SCC6	PCC				PCC				SCC1			SCC2			SCC3			SCC4								
2nd	3rd	4th	5th	6th	7th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	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						QPSK	20	18900	1880	1/49	20	900	1960	20	700	1940													23.5	23.5	-0.01
2C						QPSK	20	18900	1880	1/49	20	900	1960	20	700	1940													23.5	23.5	-0.04
12A						QPSK	20	18900	1880	1/49	20	900	1960	10	5095	737.5													23.5	23.4	-0.12
2A						QPSK	10	23095	707.5	1/0	10	5095	737.5	20	900	1960													24.1	24.1	0.05
17A						QPSK	20	18900	1880	1/49	20	900	1960	10	5790	740													23.5	23.4	-0.06
66A						QPSK	20	18900	1880	1/49	20	900	1960	20	66786	2145													23.5	23.4	-0.11
2A						QPSK	20	132572	1770	1/49	20	67036	2170	20	900	1960													23.3	23.2	-0.07
41A						QPSK	10	20525	836.5	1/0	10	2525	881.5	20	40620	2593													23.2	23.1	-0.10
41A						QPSK	15	26865	831.5	1/0	15	8865	876.5	20	40620	2593													23.4	23.3	-0.07
41A						QPSK	20	40620	2593	1/99	20	40620	2593	20	39750	2506													23.9	24.0	0.05
66B						QPSK	15	132597	1772.5	1/0	15	67061	2172.5	5	66879	2154.3													23.3	23.3	-0.02
66C						QPSK	20	132572	1770	1/49	20	67036	2170	20	66734	2139.8													24.3	24.2	-0.14
4A	5A					QPSK	20	18900	1880	1/49	20	900	1960	20	2175	2132.5	10	2525	881.5										23.5	23.6	0.11
2A	5A					QPSK	20	20175	1732.5	1/99	20	2175	2132.5	20	900	1960	10	2525	881.5										24.5	24.7	0.19
2A	4A					QPSK	10	20525	836.5	1/0	10	2525	881.5	20	900	1960	20	2175	2132.5										23.2	23.1	-0.05
4A	13A					QPSK	20	18900	1880	1/49	20	900	1960	20	2175	2132.5	10	5230	751										23.5	23.5	-0.04
2A	13A					QPSK	20	20175	1732.5	1/99	20	2175	2132.5	20	900	1960	10	5230	751										24.5	24.7	0.21
2A	4A					QPSK	10	23230	782	1/0	10	5230	751	20	900	1960	20	2175	2132.5										23.9	23.8	-0.12
4A	12A					QPSK	15	20025	1717.5	1/37	15	2025	2117.5	15	2325	2147.5	10	5095	737.5										24.5	24.5	-0.01
4A	4A					QPSK	10	23095	707.5	1/0	10	5095	737.5	15	2025	2117.5	15	2175	2132.5										24.1	24.0	-0.04
4A	17A					QPSK	15	20025	1717.5	1/37	15	2025	2117.5	15	2325	2147.5	10	5790	740										24.5	24.5	-0.03
66A	66A					QPSK	10	20525	836.5	1/0	10	2525	881.5	20	67036	2170	20	66536	2120										23.2	23.1	-0.07
66A	5A					QPSK	20	132572	1770	1/49	20	67036	2170	20	66536	2120	10	2525	881.5										23.3	23.2	-0.06
66A	66A					QPSK	10	23095	707.5	1/0	10	5095	737.5	20	67036	2170	20	66536	2120										24.1	24.0	-0.04
66A	12A					QPSK	20	132572	1770	1/49	20	67036	2170	20	66536	2120	10	5095	737.5										24.3	24.3	-0.01
41C	41C					QPSK	15	26865	831.5	1/0	15	8865	876.5	20	40620	2593	20	40422	2573.2										23.4	23.3	-0.06
41C	41C					QPSK	20	40620	2593	1/99	20	40620	2593	20	39750	2506	20	39948	2525.8										23.9	24.1	0.18
41C	41A					QPSK	20	40620	2593	1/99	20	40620	2593	20	40422	2573.5	20	39750	2506										23.9	24.1	0.19
41D	41D	41D				QPSK	20	40620	2593	1/99	20	40620	2593	20	41490	2680	20	41292	2660.2	20	41094	2640.4							23.9	24.1	0.17
41C	41C	41C				QPSK	20	40620	2593	1/99	20	40620	2593	20	40422	2573.5	20	41490	2680	20	41292	2660.2							23.9	24.0	0.08
41E	41E	41E	41E			QPSK	20	40620	2593	1/99	20	40620	2593	20	40422	2573.5	20	40224	2553.4	20	40026	2533.6	20	40224	2553.4				23.9	24.0	0.07

Note:

1. 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.
2. 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														LTE Rel 8 Tx. Power [dBm]	LTE Rel 10 Tx. Power	Delta														
	PCC		SCC		SCC			PCC				PCC				SCC1				SCC2					SCC3				SCC4									
	1st	2nd	3rd	4th	5th	6th	7th	Mode	BW (MHz)	Channel	Freq. (MHz)	RB/Offset	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	18900	1880	1/49	20	900	1960	20	66786	2145													23.5	23.5	0.01					
	[66A]	2A						QPSK	20	132572	1770	1/49	20	67036	2170	20	900	1960													24.3	24.4	0.06					
5A-41A	5A	[41A]						QPSK	10	20525	836.5	1/0	10	2525	881.5	20	40620	2593													23.2	23.1	-0.11					
26A-41A	26A	[41A]						QPSK	15	26865	831.5	1/0	15	8865	876.5	20	2593	40620													23.4	23.2	-0.16					
	[41A]	41A						QPSK	20	41055	2636.5	1/0	20	41055	2636.5	20	39750	2506													23.9	24.0	0.03					
41A-41A	41A	[41A]						QPSK	20	41055	2636.5	1/0	20	41055	2636.5	20	39750	2506													23.9	23.9	-0.04					
	[41A]	[41A]						QPSK	20	41055	2636.5	1/0	20	41055	2636.5	20	39750	2506													23.9	23.9	-0.04					
	[41A]	[41A]						QPSK	20	41055	2636.5	1/0	20	41055	2636.5	20	39750	2506													23.9	23.9	-0.04					
2A-4A-5A	2A	[4A]	5A					QPSK	20	18900	1880	1/49	20	900	1960	20	2175	2132.5	10	2525	881.5											23.5	23.7	0.18				
	[4A]	2A	5A					QPSK	20	20175	1732.5	1/99	20	2175	2132.5	20	900	1960	10	2525	881.5											23.3	23.2	-0.11				
	5A	2A	[4A]					QPSK	10	20525	836.5	1/0	10	2525	881.5	20	900	1960	20	2175	2132.5											23.2	23.1	-0.06				
2A-4A-13A	2A	[4A]	13A					QPSK	20	18900	1880	1/49	20	900	1960	20	2175	2132.5	10	5230	751												23.5	23.5	0.01			
	[4A]	2A	13A					QPSK	20	20175	1732.5	1/99	20	2175	2132.5	20	900	1960	10	5230	751												23.3	23.2	-0.12			
	13A	2A	[4A]					QPSK	10	23230	782	1/0	10	5230	751	20	900	1960	20	2175	2132.5												23.9	23.9	-0.02			
4A-4A-12A	[4A]	4A	12A					QPSK	15	20025	1717.5	1/74	15	2025	2117.5	15	2325	2147.5	10	5095	737.5												23.5	23.4	-0.09			
	[4A]	[4A]	12A					QPSK	15	20025	1717.5	1/74	15	2025	2117.5	15	2325	2147.5	10	5095	737.5												23.5	23.4	-0.05			
	4A	[4A]	12A					QPSK	15	20025	1717.5	1/37	15	2025	2117.5	15	2325	2147.5	10	5095	737.5													24.5	24.4	-0.12		
	12A	[4A]	4A					QPSK	10	23095	707.5	1/0	10	5095	737.5	15	2025	2117.5	15	2325	2147.5													24.1	24.1	0.02		
	12A	[4A]	[4A]					QPSK	10	23095	707.5	1/0	10	5095	737.5	15	2025	2117.5	15	2325	2147.5														24.1	24.0	-0.05	
	[4A]	[4A]	[4A]					QPSK	15	20025	1717.5	1/74	15	2025	2117.5	15	2325	2147.5	10	5790	740														23.5	23.5	0.01	
4A-4A-17A	[4A]	[4A]	17A					QPSK	15	20025	1717.5	1/74	15	2025	2117.5	15	2325	2147.5	10	5790	740													23.5	23.3	-0.21		
	4A	[4A]	17A					QPSK	15	20025	1717.5	1/37	15	2025	2117.5	15	2325	2147.5	10	5790	740														24.5	24.4	-0.09	
	4A	[4A]	17A					QPSK	15	20025	1717.5	1/37	15	2025	2117.5	15	2325	2147.5	10	5790	740														23.5	23.4	-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													23.2	23.1	-0.08		
	5A	[66A]	[66A]					QPSK	10	20525	836.5	1/0	10	2525	881.5	20	66536	2120	20	67036	2170													23.2	23.2	0.07		
	[66A]	66A	5A					QPSK	20	132572	1770	1/49	20	67036	2170	20	66536	2120	10	2525	881.5													24.3	24.3	-0.04		
	[66A]	[66A]	5A					QPSK	20	132572	1770	1/49	20	67036	2170	20	66536	2120	10	2525	881.5														24.3	24.3	0.00	
	[66A]	[66A]	5A					QPSK	20	132572	1770	1/49	20	67036	2170	20	66536	2120	10	2525	881.5														24.3	24.3	-0.03	
	[66A]	[66A]	66A					QPSK	10	23095	707.5	1/0	10	5095	737.5	20	66536	2120	20	67036	2170														24.1	24.0	-0.06	
12A-66A-66A	12A	[66A]	66A					QPSK	10	23095	707.5	1/0	10	5095	737.5	20	66536	2120	20	67036	2170													24.1	24.0	-0.05		
	12A	[66A]	[66A]					QPSK	10	23095	707.5	1/0	10	5095	737.5	20	66536	2120	20	67036	2170														24.1	24.0	-0.05	
	[66A]	66A	12A					QPSK	20	132572	1770	1/49	20	67036	2170	20	66536	2120	10	5095	737.5														24.3	24.5	0.11	
	[66A]	[66A]	12A					QPSK	20	132572	1770	1/49	20	67036	2170	20	66536	2120	10	5095	737.5														24.3	24.3	-0.03	
	66A	[66A]	12A					QPSK	20	132572	1770	1/49	20	67036	2170	20	66536	2120	10	5095	737.5														24.3	24.4	0.07	
	[66A]	[66A]	12A					QPSK	15	26865	831.5	1/0	15	8865	876.5	20	40620	2593	20	40422	2573.2														23.4	23.3	-0.10	
26A-41C	[41A]	41C	41C					QPSK	20	40620	2593	1/99	20	40620	2593	20	39750	2506	20	39948	2525.8													23.9	23.9	-0.09		
	41A	[41C]	[41C]					QPSK	20	40620	2593	1/99	20	40620	2593	20	39750	2506	20	39948	2525.8														23.9	23.8	-0.16	
	[41A]	[41C]	[41C]					QPSK	20	40620	2593	1/99	20	40620	2593	20	39750	2506	20	39948	2525.8															23.9	23.9	-0.02
	41C	41C	[41A]					QPSK	20	40620	2593	1/99	20	40620	2593	20	40422	2573.5	20	39750	2506														23.9	23.9	-0.04	
	[41C]	[41C]	41A					QPSK	20	40620	2593	1/99	20	40620	2593	20	40422	2573.5	20	39750	2506															23.9	23.9	-0.03
	[41C]	[41C]	[41A]					QPSK	20	40620	2593	1/99	20	40620	2593	20	40422	2573.5	20	39750	2506															23.9	23.9	-0.04
	[41D]	[41D]	[41D]					QPSK	20	40620	2593	1/99	20	40620	2593	20	40422	2573.5	20	40224	2553.4															23.9	23.9	-0.05
41A-41D	[41A]	41																																				