FCC ID: BCGA1934

Date: 10/04/2018

LTE Information per KDB 941225 D05A v01r02	
1 FCC ID:	**BCGA1934**
2 References to Standards	
a) LTE release and version numbers of the 3GPP documents used to implement the specific device(s):	Release 13, March 2016 Version
b) 3GPP release and version numbers required for power measurements and RF test setup conditions:	Release 13, March 2016 Version
3 When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities	
a) Intra-band and inter-band carrier aggregation for both downlink and uplink, including Wi-Fi offloading using LTE-U, LAA or LWA protocols?	Intra-Band & Inter-band DL CA and Intra-Band UL CA are supported. Wi-Fi offloading using LTE-U and LWA is not supported.
i) Support of contiguous and non-contiguous component carriers for intra-band aggregation:	Intra-band DL CA supports contiguous and non-contiguous configurations. Intra-Band UL CA supports contiguous configuration only. See Section 3)b) and 3)c).
ii) Frequency band combinations supported for intra-band and inter-band carrier aggregation:	
(a) DL CA	See Section 3)b)i)
(b) DL CA with DL 4x4 MIMO	See Section 3)b)i)
(c) UL CA	See Section 3)c)i)
iii) Number of component carriers, including all combinations, supported for intra-band and inter-band carrier aggregation in the uplink and downlink:	See Section 3)b)i) & 3)c)i)
iv) The channel bandwidth configurations applicable to each carrier aggregation configuration and the applicable carrier aggregation (CA) Bandwidth Classes; A … F, etc.:	See Section 3)b)i) & 3)c)i)
v) Restrictions on certain channel combinations:	None
vi) RB combinations supported by the carrier aggregation configurations:	All RB configurations supported.
b) Downlink Carrier Aggregation supported?	Yes
i) Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations:	
(a) DL CA	See LTE DL CA checklist
(b) DL CA with DL 4x4 MIMO	See LTE DL CA with DL 4x4 MIMO checklist
ii) Uplink maximum output power measurement with downlink carrier aggregation active measured, using the highest output channel measured without downlink carrier aggregation and not more than 1/4 dB higher than the maximum output power measured when downlink carrier aggregation inactive?	Yes, Please see SAR Report
iii) SAR measurements required for downlink carrier aggregation per 3)b)ii)?	No
c) Uplink Carrier Aggregation supported?	Yes
i) Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations:	See LTE UL CA checklist
ii) When power reduction applies, the maximum output power specifications and measured results with and without carrier aggregation in the reduced power configurations are included?	Yes, Please see SAR Report
iii) Does the maximum output power specified for production units, including tune up tolerance, varies across channel bandwidth, modulation RB allocation, channels etc.?	No
d) Description of Test Equipment and Setup for power and SAR measurements?	Please see SAR Report
e) Other restrictions or limitations associated with the carrier aggregation implementation?	No
4 Enhanced SC-FDMA supported in the UL? Provide details of implementation, limitations and restrictions, including:	Enhanced SC-FDMA not supported
a) Decoupling of control and data transmissions to enable simultaneous transmission of PUCCH and PUSCH	N/A
b) Non-contiguous data transmission with clustered SC-FDMA to enable non-contiguous subcarriers in PUSCH transmissions.	N/A
c) Issues relating to dynamic switching between schemes	N/A
d) When a partially allocated PUSCH, a cluster of partially allocated PUSCH or a fully allocated PUSCH is transmitted simultaneously either with or without PUCCH, peak to average power ratio of the signal can increase substantially above Rel. 14 implementations	N/A
5 Details of implemenation of uplink LTE MIMO or other transmit diversity configurations:	No uplink LTE MIMO support.
6 UE category and descriptions of the category requirements for supporting carrier aggregation, uplink MIMO and other UE configurations:	DL UE Cat 16 (QPSK, 16QAM, 64QAM, 256QAM) UL UE Cat 13 (QPSK, 16QAM, 64QAM)
7 Expected SAR complications with hardware or firmware associated with any LTE Rel. 14 features including: CoMP, HetNet, Relay, SON, cross carrier scheduling, eICIC, enhanced downlink MIMO, MBMS, M2M/D2D support etc.:	No expected SAR complications
8 Detailed descriptions of SVLTE support in any carrier aggregation configurations:	This device does not support SVLTE.
9 Description of the device and other transmitters contained within it to identify various standalone and/or simultaneous transmission SAR testing concerns.	See simultaneous transmission table.
NOTES for the following tables:	
- BCS (Bandwidth Combination Set) # supported for a CA configuration is indicated by the (#) notation right next to it. A CA configuration without (#) at the end has default BCS=0. For example, CA_2A-12A has BCS=0, and CA_2A-12A (1) has BCS=1	
- Depending on supported BCS # for each CA configuration, the CC (component carrier) # identifies the bandwidths supported for the LTE bands in the order of how they appear in the listed configuration. For example, for a given combination "CA_12A-66B", CC1 would identify the bandwidths for LTE Band 12, CC2 would identify the bandwidths for LTE Band 66 (one CC), and CC3 would identify the bandwidths for LTE Band 66 (remaining CC).	

		LTE DL CA Checklist		
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	b)	3GPP release and version numbers required for power measurements and RF test setup conditions:	Release 13, March 2016 Version	
3	When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities			
	b)	Downlink Carrier Aggregation Supported?	Yes	
	i)	Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations		

(a) DL CA

Configuration	Supported Channel Bandwidth [MHz]		Restriction
	CC1	CC2	
CA_2C	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-2A	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-4A	1.4, 3, 5, 10, 15, 20	5, 10, 15, 20	
CA_2A-4A (1)	5, 10	5, 10	
CA_2A-4A (2)	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-5A	5, 10, 15, 20	5, 10	
CA_2A-5A (1)	5, 10	5, 10	
CA_2A-12A	5, 10, 15, 20	3, 5, 10	
CA_2A-12A (1)	5, 10, 15, 20	5, 10	
CA_2A-12A (2)	5, 10	5, 10	
CA_2A-13A	5, 10, 15, 20	10	
CA_2A-13A (1)	5, 10	10	
CA_2A-14A	5, 10, 15, 20	5, 10	
CA_2A-17A	5, 10	5, 10	
CA_2A-29A	5, 10	3, 5, 10	B29 SCC Only
CA_2A-29A (1)	5, 10	5, 10	B29 SCC Only
CA_2A-29A (2)	5, 10, 15, 20	5, 10	B29 SCC Only
CA_2A-30A	5, 10, 15, 20	5, 10	
CA_2A-46A	5, 10, 15, 20	20	B46 SCC Only
CA_2A-66A	1.4, 3, 5, 10, 15, 20	5, 10, 15, 20	
CA_2A-66A (1)	5, 10	5, 10	
CA_2A-66A (2)	5, 10, 15, 20	5, 10, 15, 20	
CA_4A-4A	5, 10, 15, 20	5, 10, 15, 20	
CA_4A-4A (1)	5, 10	5, 10	
CA_4A-5A	5, 10	5, 10	
CA_4A-5A (1)	5, 10, 15, 20	5, 10	
CA_4A-7A	5, 10	5, 10, 15, 20	
CA_4A-7A (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_4A-12A	1.4, 3, 5, 10	5, 10	
CA_4A-12A (1)	1.4, 3, 5, 10, 15, 20	5, 10	
CA_4A-12A (2)	5, 10, 15, 20	3, 5, 10	
CA_4A-12A (3)	5, 10	5, 10	
CA_4A-12A (4)	5, 10, 15, 20	5, 10	
CA_4A-12A (5)	5, 10, 15	5	
CA_4A-13A	5, 10, 15, 20	10	
CA_4A-13A (1)	5, 10	10	
CA_4A-17A	5, 10	5, 10	
CA_4A-29A	5, 10	3, 5, 10	B29 SCC Only
CA_4A-29A (1)	5, 10	5, 10	B29 SCC Only
CA_4A-29A (2)	5, 10, 15, 20	5, 10	B29 SCC Only
CA_4A-30A	5, 10, 15, 20	5, 10	
CA_4A-46A	5, 10, 15, 20	20	B46 SCC Only
CA_5B	5, 10	5, 10	
CA_5A-7A	1.4, 3, 5, 10	10, 15, 20	
CA_5A-7A (1)	5, 10	10, 15, 20	
CA_5A-25A	5, 10	5, 10, 15, 20	
CA_5A-30A	5, 10	5, 10	
CA_5A-41A	5, 10	20	B41 SCC Only
CA_5A-46A	5, 10	20	B46 SCC Only
CA_5A-46A (1)	3, 5, 10	10, 20	B46 SCC Only
CA_5A-66A	5, 10	5, 10, 15, 20	
CA_7B	15	5	
CA_7A-7A	5, 10, 15, 20	10, 15, 20	
CA_7A-7A (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_7A-7A (2)	5, 10, 15, 20	5, 10	
CA_7A-7A (3)	10, 15, 20	10, 15, 20	
CA_7C	15, 20	15, 20	
CA_7C (1)	10, 15, 20	10, 15, 20	
CA_7C (2)	15, 20	10, 15, 20	
CA_7A-12A	5, 10, 15, 20	5, 10	
CA_7A-46A	5, 10, 15, 20	20	B46 SCC Only
CA_7A-46A (1)	5, 10, 15, 20	10, 20	B46 SCC Only
CA_7A-66A	5, 10, 15, 20	5, 10, 15, 20	
CA_12B	5	5, 10	
CA_12A-30A	5, 10	5, 10	
CA_12A-66A	5, 10	1.4, 3, 5, 10	
CA_12A-66A (1)	5, 10	1.4, 3, 5, 10, 15, 20	
CA_12A-66A (2)	3, 5, 10	5, 10, 15, 20	
CA_12A-66A (3)	5, 10	5, 10	
CA_12A-66A (4)	5, 10	5, 10, 15, 20	
CA_12A-66A (5)	5	5, 10, 15	
CA_13A-46A	5, 10	20	B46 SCC Only
CA_13A-66A	5, 10	5, 10, 15, 20	
CA_14A-30A	5, 10	5, 10	
CA_14A-66A	5, 10	5, 10, 15, 20	
CA_25A-25A	5, 10	5, 10	
CA_25A-25A (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_25A-26A	3, 5, 10, 15, 20	1.4, 3, 5, 10	
CA_25A-26A (1)	3, 5, 10	3, 5, 10	
CA_25A-26A (2)	5, 10	5, 10	
CA_29A-30A	5, 10	5, 10	B29 SCC Only
CA_29A-66A	5, 10	5, 10, 15, 20	B29 SCC Only
CA_30A-66A	5, 10	5, 10, 15, 20	
CA_41A-41A	10, 15, 20	10, 15, 20	
CA_41A-41A (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_41C	10, 15, 20	10, 15, 20	
CA_41C (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_41C (2)	10, 15, 20	10, 15, 20	
CA_41C (3)	10, 20	20	
CA_66B	5, 10, 15	5, 10, 15	
CA_66C	5, 10, 15, 20	5, 10, 15, 20	
CA_66A-66A	5, 10, 15, 20	5, 10, 15, 20	
CA_46A-66A	20	5, 10, 15, 20	B46 SCC Only

LTE DL CA Checklist				

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b)	3GPP release and version numbers required for power measurements and RF test setup conditions:		Release 13, March 2016 Version		
3	When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities				
	b) Downlink Carrier Aggregation Supported?		Yes		
	i) Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations				

(a) DL CA

Configuration	Supported Channel Bandwidth [MHz]			Restriction
	CC1	CC2	CC3	
CA_2A-2A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-4A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-2A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2C-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-5B	5, 10, 15, 20	5, 10	5, 10	
CA_2A-2A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2C-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-12B	5, 10, 15, 20	5	5, 10	
CA_2A-2A-13A	5, 10, 15, 20	5, 10, 15, 20	10	
CA_2A-2A-14A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-2A-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_2C-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_2C-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-2A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-2A-46A	5, 10, 15, 20	5, 10, 15, 20	20	B46 SCC Only
CA_2A-46A-46A	5, 10, 15, 20	20	20	B46 SCC Only
CA_2A-46C	5, 10, 15, 20	20	20	B46 SCC Only
CA_2A-2A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2C-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-66B	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_2A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-66A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-4A-13A	5, 10, 15, 20	5, 10, 15, 20	10	
CA_2A-4A-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_2A-4A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-5A-30A	5, 10, 15, 20	5, 10	5, 10	
CA_2A-5A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-12A-30A	5, 10, 15, 20	5, 10	5, 10	
CA_2A-12A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-13A-46A	5, 10, 15, 20	5, 10	20	B46 SCC Only
CA_2A-13A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-14A-30A	5, 10, 15, 20	5, 10	5, 10	
CA_2A-14A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-29A-30A	5, 10, 15, 20	5, 10	5, 10	B29 SCC Only
CA_2A-29A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	B29 SCC Only
CA_2A-30A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-46A-66A	5, 10, 15, 20	20	5, 10, 15, 20	B46 SCC Only
CA_4A-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_4A-5B	5, 10, 15, 20	5, 10	5, 10	
CA_4A-4A-7A	5, 10	5, 10	5, 10, 15, 20	
CA_4A-4A-7A (1)	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_4A-7A-7A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_4A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_4A-12B	5, 10, 15, 20	5	5, 10	
CA_4A-4A-13A	5, 10, 15, 20	5, 10, 15, 20	10	
CA_4A-4A-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_4A-4A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_4A-46A-46A	5, 10, 15, 20	20	20	B46 SCC Only
CA_4A-46C	5, 10, 15, 20	20	20	B46 SCC Only
CA_4A-5A-30A	5, 10, 15, 20	5, 10	5, 10	
CA_4A-7A-12A	5, 10	5, 10, 15, 20	5, 10	
CA_4A-7A-12A (1)	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_4A-12A-30A	5, 10, 15, 20	5, 10	5, 10	
CA_4A-29A-30A	5, 10, 15, 20	5, 10	5, 10	B29 SCC Only
CA_5B-30A	5, 10	5, 10	5, 10	
CA_5A-46C	5, 10	20	20	B46 SCC Only
CA_5A-46C (1)	5, 10	10, 20	10, 20	B46 SCC Only
CA_5B-66A	5, 10	5, 10	5, 10, 15, 20	
CA_5A-66B	5, 10	5, 10, 15	5, 10, 15	
CA_5A-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_5A-66A-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_5A-30A-66A	5, 10	5, 10	5, 10, 15, 20	
CA_7A-46C	5, 10, 15, 20	20	20	B46 SCC Only
CA_7A-46C (1)	5, 10, 15, 20	10, 20	10, 20	B46 SCC Only
CA_12A-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_12A-66A-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_12A-30A-66A	5, 10	5, 10	5, 10, 15, 20	
CA_13A-46C	5, 10	20	20	B46 SCC Only
CA_13A-66A-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_13A-66B	5, 10	5, 10, 15	5, 10, 15	
CA_13A-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_13A-46A-66A	5, 10	20	5, 10, 15, 20	B46 SCC Only
CA_14A-66A-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_14A-30A-66A	5, 10	5, 10	5, 10, 15, 20	
CA_25A-25A-26A	5, 10, 15, 20	5, 10, 15, 20	3, 5	
CA_29A-66A-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	B29 SCC Only
CA_29A-30A-66A	5, 10	5, 10	5, 10, 15, 20	B29 SCC Only
CA_30A-66A-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_41A-41C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_41D	10, 15, 20	10, 15, 20	10, 15, 20	
CA_46A-46A-66A	20	20	5, 10, 15, 20	B46 SCC Only
CA_46C-66A	20	20	5, 10, 15, 20	B46 SCC Only
CA_46A-66A-66A	20	5, 10, 15, 20	5, 10, 15, 20	B46 SCC Only
CA_66D	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_66A-66B	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_66A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	

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b)	3GPP release and version numbers required for power measurements and RF test setup conditions:	Release 13, March 2016 Version
3	When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities	
b)	Downlink Carrier Aggregation Supported?	Yes
i)	Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations	

(a) DL CA

Configuration	Supported Channel Bandwidth [MHz]				Restriction
	CC1	CC2	CC3	CC4	
CA_2A-2A-4A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-2A-12B	5, 10, 15, 20	5, 10, 15, 20	5	5, 10	
CA_2A-2A-46C	5, 10, 15, 20	5, 10, 15, 20	20	20	B46 SCC Only
CA_2A-46A-46C	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_2A-46D	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_2A-2A-66A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-2A-66B	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_2A-2A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-66A-66B	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_2A-66A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-2A-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-4A-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-4A-5B	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_2A-2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-4A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-4A-12B	5, 10, 15, 20	5, 10, 15, 20	5	5, 10	
CA_2A-2A-5A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_2A-5B-30A	5, 10, 15, 20	5, 10	5, 10	5, 10	
CA_2A-2A-5A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-5A-66B	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15	
CA_2A-5A-66C	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-5A-66A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-5B-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	
CA_2A-2A-12A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_2A-2A-12A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-12A-66A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-12A-66C	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-13A-46C	5, 10, 15, 20	5, 10	20	20	B46 SCC Only
CA_2A-2A-13A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-13A-66A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-13A-66B	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15	
CA_2A-13A-66C	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-2A-14A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-14A-66A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-2A-29A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	B29 SCC Only
CA_2A-2A-30A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-46C-66A	5, 10, 15, 20	20	20	5, 10, 15, 20	B46 SCC Only
CA_2A-4A-5A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_2A-4A-12A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_2A-4A-29A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	B29 SCC Only
CA_2A-5A-30A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	
CA_2A-12A-30A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	
CA_2A-14A-30A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	
CA_2A-29A-30A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	B29 SCC Only
CA_4A-4A-5B	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_4A-4A-12B	5, 10, 15, 20	5, 10, 15, 20	5	5, 10	
CA_4A-46A-46C	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_4A-46D	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_4A-4A-5A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_4A-4A-12A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_5A-46D	5, 10	20	20	20	B46 SCC Only
CA_5A-46D (1)	5, 10	10, 20	10, 20	20	B46 SCC Only
CA_5B-66A-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_5B-66C	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_5A-66D	5, 10	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_5A-66A-66B	5, 10	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_5A-66A-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_5B-30A-66A	5, 10	5, 10	5, 10	5, 10, 15, 20	
CA_5A-30A-66A-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_7A-46D	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_7A-46D (1)	5, 10, 15, 20	10, 20	10, 20	20	B46 SCC Only
CA_12A-30A-66A-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_13A-46D	5, 10	20	20	20	B46 SCC Only
CA_13A-66A-66B	5, 10	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_13A-66A-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_13A-46C-66A	5, 10	20	20	5, 10, 15, 20	B46 SCC Only
CA_14A-30A-66A-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_41A-41D	5, 10, 15, 20	10, 15, 20	10, 15, 20	10, 15, 20	
CA_41C-41C	10, 15, 20	10, 15, 20	10, 15, 20	10, 15, 20	
CA_41E	15, 20	15, 20	15, 20	20	
CA_46A-46C-66A	20	20	20	5, 10, 15, 20	B46 SCC Only
CA_46D-66A	20	20	20	5, 10, 15, 20	B46 SCC Only
CA_46C-66A-66A	20	20	5, 10, 15, 20	5, 10, 15, 20	B46 SCC Only

	LTE DL CA Checklist	
1	FCC ID:	**BCGA1934**
2	References to Standards	
a)	LTE release and version numbers of the 3GPP documents used to implement the specific device(s):	Release 13, March 2016 Version
b)	3GPP release and version numbers required for power measurements and RF test setup conditions:	Release 13, March 2016 Version
3	When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities	
b)	Downlink Carrier Aggregation Supported?	Yes
i)	Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations	

(a) DL CA

Configuration	Supported Channel Bandwidth [MHz]					Restriction
	CC1	CC2	CC3	CC4	CC5	
CA_2A-2A-46D	5, 10, 15, 20	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_2A-46A-46D	5, 10, 15, 20	20	20	20	20	B46 SCC Only
CA_2A-46E	5, 10, 15, 20	20	20	20	20	B46 SCC Only
CA_2A-2A-66A-66B	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_2A-2A-66A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-2A-5A-66B	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15	
CA_2A-2A-5A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-5B-66A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-5B-66C	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-13A-46D	5, 10, 15, 20	5, 10	20	20	20	B46 SCC Only
CA_2A-46D-66A	5, 10, 15, 20	20	20	20	5, 10, 15, 20	B46 SCC Only
CA_2A-5B-30A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10	5, 10, 15, 20	
CA_4A-46A-46D	5, 10, 15, 20	20	20	20	20	B46 SCC Only
CA_5B-30A-66A-66A	5, 10	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_13A-46E	5, 10	20	20	20	20	B46 SCC Only
CA_13A-46D-66A	5, 10	20	20	20	5, 10, 15, 20	B46 SCC Only
CA_41C-41D	10, 15, 20	10, 15, 20	10, 15, 20	10, 15, 20	10, 15, 20	
CA_46A-46D-66A	20	20	20	20	5, 10, 15, 20	B46 SCC Only
CA_46E-66A	20	20	20	20	5, 10, 15, 20	B46 SCC Only
CA_46D-66A-66A	20	20	20	5, 10, 15, 20	5, 10, 15, 20	B46 SCC Only

LTE DL CA with DL 4x4 MIMO Checklist				

1	FCC ID:		**BCGA1934**		
2	References to Standards				
a)	LTE release and version numbers of the 3GPP documents used to implement the specific device(s):		Release 13, March 2016 Version		
b)	3GPP release and version numbers required for power measurements and RF test setup conditions:		Release 13, March 2016 Version		
3	When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities				
b)	Downlink Carrier Aggregation Supported?		Yes		
i)	Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations				

(b) DL CA with DL 4x4 MIMO

Note: [CC] indicates CC with 4x4 MIMO DL Antenna Configuration

Configuration	Supported Channel Bandwidth [MHz]		Restriction
	CC1	CC2	
CA_[2C]	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-2A	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-4A	1.4, 3, 5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-4A (1)	5, 10	5, 10	
CA_[2A]-4A (2)	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-[4A]	1.4, 3, 5, 10, 15, 20	5, 10, 15, 20	
CA_2A-[4A] (1)	5, 10	5, 10	
CA_2A-[4A] (2)	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-5A	5, 10, 15, 20	5, 10	
CA_[2A]-5A (1)	5, 10	5, 10	
CA_[2A]-12A	5, 10, 15, 20	3, 5, 10	
CA_[2A]-12A (1)	5, 10, 15, 20	5, 10	
CA_[2A]-12A (2)	5, 10	5, 10	
CA_[2A]-13A	5, 10, 15, 20	10	
CA_[2A]-13A (1)	5, 10	10	
CA_[2A]-14A	5, 10, 15, 20	5, 10	
CA_[2A]-17A	5, 10	5, 10	
CA_[2A]-29A	5, 10	3, 5, 10	B29 SCC Only
CA_[2A]-29A (1)	5, 10	5, 10	B29 SCC Only
CA_[2A]-29A (2)	5, 10, 15, 20	5, 10	B29 SCC Only
CA_[2A]-30A	5, 10, 15, 20	5, 10	
CA_2A-[30A]	5, 10, 15, 20	5, 10	
CA_[2A]-46A	5, 10, 15, 20	20	B46 SCC Only
CA_[2A]-66A	1.4, 3, 5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-66A (1)	5, 10	5, 10	
CA_[2A]-66A (2)	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-[66A]	1.4, 3, 5, 10, 15, 20	5, 10, 15, 20	
CA_2A-[66A] (1)	5, 10	5, 10	
CA_2A-[66A] (2)	5, 10, 15, 20	5, 10, 15, 20	
CA_[4A]-4A	5, 10, 15, 20	5, 10, 15, 20	
CA_[4A]-4A (1)	5, 10	5, 10	
CA_[4A]-5A	5, 10	5, 10	
CA_[4A]-5A (1)	5, 10, 15, 20	5, 10	
CA_[4A]-7A	5, 10	5, 10, 15, 20	
CA_[4A]-7A (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_4A-[7A]	5, 10	5, 10, 15, 20	
CA_4A-[7A] (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_[4A]-12A	1.4, 3, 5, 10	5, 10	
CA_[4A]-12A (1)	1.4, 3, 5, 10, 15, 20	5, 10	
CA_[4A]-12A (2)	5, 10, 15, 20	3, 5, 10	
CA_[4A]-12A (3)	5, 10	5, 10	
CA_[4A]-12A (4)	5, 10, 15, 20	5, 10	
CA_[4A]-12A (5)	5, 10, 15	5	
CA_[4A]-13A	5, 10, 15, 20	10	
CA_[4A]-13A (1)	5, 10	10	
CA_[4A]-17A	5, 10	5, 10	
CA_[4A]-29A	5, 10	3, 5, 10	B29 SCC Only
CA_[4A]-29A (1)	5, 10	5, 10	B29 SCC Only
CA_[4A]-29A (2)	5, 10, 15, 20	5, 10	B29 SCC Only
CA_[4A]-30A	5, 10, 15, 20	5, 10	
CA_4A-[30A]	5, 10, 15, 20	5, 10	
CA_[4A]-46A	5, 10, 15, 20	20	B46 SCC Only
CA_5A-[7A]	1.4, 3, 5, 10	10, 15, 20	
CA_5A-[7A] (1)	5, 10	10, 15, 20	
CA_5A-[25A]	5, 10	5, 10, 15, 20	
CA_5A-[30A]	5, 10	5, 10	
CA_5A-[41A]	5, 10	20	B41 SCC Only
CA_5A-[66A]	5, 10	5, 10, 15, 20	
CA_[7B]	15	5	
CA_[7A]-7A	5, 10, 15, 20	10, 15, 20	
CA_[7A]-7A (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_[7A]-7A (2)	5, 10, 15, 20	5, 10	
CA_[7A]-7A (3)	10, 15, 20	10, 15, 20	
CA_[7C]	15, 20	15, 20	
CA_[7C] (1)	10, 15, 20	10, 15, 20	
CA_[7C] (2)	15, 20	10, 15, 20	
CA_[7A]-12A	5, 10, 15, 20	5, 10	
CA_[7A]-46A	5, 10, 15, 20	20	B46 SCC Only
CA_[7A]-46A (1)	5, 10, 15, 20	10, 20	B46 SCC Only
CA_[7A]-66A	5, 10, 15, 20	5, 10, 15, 20	
CA_7A-[66A]	5, 10, 15, 20	5, 10, 15, 20	
CA_12A-[30A]	5, 10	5, 10	
CA_12A-[66A]	5, 10	1.4, 3, 5, 10	
CA_12A-[66A] (1)	5, 10	1.4, 3, 5, 10, 15, 20	
CA_12A-[66A] (2)	3, 5, 10	5, 10, 15, 20	
CA_12A-[66A] (3)	5, 10	5, 10	
CA_12A-[66A] (4)	5, 10	5, 10, 15, 20	
CA_12A-[66A] (5)	5	5, 10, 15	
CA_13A-[66A]	5, 10	5, 10, 15, 20	
CA_14A-[30A]	5, 10	5, 10	
CA_14A-[66A]	5, 10	5, 10, 15, 20	
CA_[25A]-25A	5, 10	5, 10	
CA_[25A]-25A (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_[25A]-26A	3, 5, 10, 15, 20	1.4, 3, 5, 10	
CA_[25A]-26A (1)	3, 5, 10	3, 5, 10	
CA_[25A]-26A (2)	5, 10	5, 10	
CA_29A-[30A]	5, 10	5, 10	B29 SCC Only
CA_29A-[66A]	5, 10	5, 10, 15, 20	B29 SCC Only
CA_[30A]-66A	5, 10	5, 10, 15, 20	
CA_30A-[66A]	5, 10	5, 10, 15, 20	
CA_[41A]-41A	10, 15, 20	10, 15, 20	
CA_[41A]-41A (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_[41C]	10, 15, 20	10, 15, 20	
CA_[41C] (1)	5, 10, 15, 20	5, 10, 15, 20	
CA_[41C] (2)	10, 15, 20	10, 15, 20	
CA_[41C] (3)	10, 20	20	
CA_[66B]	5, 10, 15	5, 10, 15	
CA_[66C]	5, 10, 15, 20	5, 10, 15, 20	
CA_[66A]-66A	5, 10, 15, 20	5, 10, 15, 20	
CA_46A-[66A]	20	5, 10, 15, 20	B46 SCC Only

LTE DL CA with DL 4x4 MIMO Checklist

1	FCC ID:			BCGA1934		
2	References to Standards					
	a)	LTE release and version numbers of the 3GPP documents used to implement the specific device(s):		Release 13, March 2016 Version		
	b)	3GPP release and version numbers required for power measurements and RF test setup conditions:		Release 13, March 2016 Version		
3	When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities					
	b)	Downlink Carrier Aggregation Supported?		Yes		
		i)	Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations			

(b) DL CA with DL 4x4 MIMO

Note: [CC] indicates CC with 4x4 MIMO DL Antenna Configuration

Configuration	Supported Channel Bandwidth [MHz]			Restriction
	CC1	CC2	CC3	
CA_[2A]-2A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-[4A]-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-2A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2C]-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2A]-5B	5, 10, 15, 20	5, 10	5, 10	
CA_[2A]-2A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2C]-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2A]-12B	5, 10, 15, 20	5	5, 10	
CA_[2A]-2A-13A	5, 10, 15, 20	5, 10, 15, 20	10	
CA_[2A]-2A-14A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2A]-2A-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_[2C]-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_[2C]-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2C-[30A]	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2A]-2A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2A]-2A-46A	5, 10, 15, 20	5, 10, 15, 20	20	B46 SCC Only
CA_[2A]-46C	5, 10, 15, 20	20	20	B46 SCC Only
CA_[2A]-2A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_[2C]-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2C-[66A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-66B	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_2A-[66B]	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_[2A]-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-[66C]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-[66A]-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-[4A]-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2A]-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-[4A]-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[2A]-4A-13A	5, 10, 15, 20	5, 10, 15, 20	10	
CA_2A-[4A]-13A	5, 10, 15, 20	5, 10, 15, 20	10	
CA_[2A]-4A-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_2A-[4A]-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_[2A]-4A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-[4A]-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-4A-[30A]	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_2A-5A-[30A]	5, 10, 15, 20	5, 10	5, 10	
CA_[2A]-5A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-5A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-12A-[30A]	5, 10, 15, 20	5, 10	5, 10	
CA_[2A]-12A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-12A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_[2A]-13A-46A	5, 10, 15, 20	5, 10	20	B46 SCC Only
CA_[2A]-13A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-13A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-14A-[30A]	5, 10, 15, 20	5, 10	5, 10	
CA_[2A]-14A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-14A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-29A-[30A]	5, 10, 15, 20	5, 10	5, 10	B29 SCC Only
CA_[2A]-29A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	B29 SCC Only
CA_2A-29A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20	B29 SCC Only
CA_[2A]-30A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-[30A]-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_2A-30A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20	
CA_[2A]-46A-66A	5, 10, 15, 20	20	5, 10, 15, 20	B46 SCC Only
CA_2A-46A-[66A]	5, 10, 15, 20	20	5, 10, 15, 20	B46 SCC Only
CA_[4A]-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[4A]-5B	5, 10, 15, 20	5, 10	5, 10	
CA_[4A]-4A-7A	5, 10	5, 10	5, 10, 15, 20	
CA_[4A]-4A-7A (1)	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_4A-[7A]-7A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_[4A]-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[4A]-12B	5, 10, 15, 20	5	5, 10	
CA_[4A]-4A-13A	5, 10, 15, 20	5, 10, 15, 20	10	
CA_[4A]-4A-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only
CA_[4A]-4A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_[4A]-46C	5, 10, 15, 20	20	20	B46 SCC Only
CA_4A-5A-[30A]	5, 10, 15, 20	5, 10	5, 10	
CA_4A-[7A]-12A	5, 10	5, 10, 15, 20	5, 10	
CA_4A-[7A]-12A (1)	5, 10, 15, 20	5, 10, 15, 20	5, 10	
CA_4A-12A-[30A]	5, 10, 15, 20	5, 10	5, 10	
CA_4A-29A-[30A]	5, 10, 15, 20	5, 10	5, 10	B29 SCC Only
CA_5B-[30A]	5, 10	5, 10	5, 10	
CA_5B-[66A]	5, 10	5, 10	5, 10, 15, 20	
CA_5A-[66B]	5, 10	5, 10, 15	5, 10, 15	
CA_5A-[66C]	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_5A-[66A]-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_5A-[30A]-66A	5, 10	5, 10	5, 10, 15, 20	
CA_[7A]-46C	5, 10, 15, 20	20	20	B46 SCC Only
CA_[7A]-46C (1)	5, 10, 15, 20	10, 20	10, 20	B46 SCC Only
CA_12A-[66C]	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_12A-[66A]-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_12A-[30A]-66A	5, 10	5, 10	5, 10, 15, 20	
CA_13A-[66A]-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_13A-[66B]	5, 10	5, 10, 15	5, 10, 15	
CA_13A-[66C]	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_13A-46A-[66A]	5, 10	20	5, 10, 15, 20	B46 SCC Only
CA_14A-[66A]-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_14A-[30A]-66A	5, 10	5, 10	5, 10, 15, 20	
CA_[25A]-25A-26A	5, 10, 15, 20	5, 10, 15, 20	3, 5	
CA_29A-[66A]-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	B29 SCC Only
CA_29A-[30A]-66A	5, 10	5, 10	5, 10, 15, 20	B29 SCC Only
CA_30A-[66A]-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_[41A]-41C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_41A-[41C]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_46C-[66A]	20	20	5, 10, 15, 20	B46 SCC Only
CA_46A-[66A]-66A	20	5, 10, 15, 20	5, 10, 15, 20	B46 SCC Only
CA_[66A]-66B	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_[66A]-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	

LTE DL CA with DL 4x4 MIMO Checklist

1	FCC ID:			BCGA1934		
2	References to Standards					
a)	LTE release and version numbers of the 3GPP documents used to implement the specific device(s):			Release 13, March 2016 Version		
b)	3GPP release and version numbers required for power measurements and RF test setup conditions:			Release 13, March 2016 Version		
3	When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities					
b)	Downlink Carrier Aggregation Supported?			Yes		
i)	Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations					

(b) DL CA with DL 4x4 MIMO

Note: [CC] indicates CC with 4x4 MIMO DL Antenna Configuration

Configuration	Supported Channel Bandwidth [MHz]				Restriction
	CC1	CC2	CC3	CC4	
CA_[2A]-2A-12B	5, 10, 15, 20	5, 10, 15, 20	5	5, 10	
CA_[2A]-2A-46C	5, 10, 15, 20	5, 10, 15, 20	20	20	B46 SCC Only
CA_[2A]-46D	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_[2A]-2A-66B	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_[2A]-2A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_2A-[66A]-66B	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_2A-[66A]-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-4A-5B	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_2A-[4A]-5B	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_[2A]-4A-12B	5, 10, 15, 20	5, 10, 15, 20	5	5, 10	
CA_2A-[4A]-12B	5, 10, 15, 20	5, 10, 15, 20	5	5, 10	
CA_2A-5B-[30A]	5, 10, 15, 20	5, 10	5, 10	5, 10	
CA_[2A]-5A-66B	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15	
CA_[2A]-5A-66C	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-5B-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	
CA_2A-5B-[66A]	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20	
CA_[2A]-12A-66C	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-13A-66B	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15	
CA_[2A]-13A-66C	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_[2A]-46C-66A	5, 10, 15, 20	20	20	5, 10, 15, 20	B46 SCC Only
CA_2A-46C-[66A]	5, 10, 15, 20	20	20	5, 10, 15, 20	B46 SCC Only
CA_[4A]-4A-5B	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10	
CA_[4A]-4A-12B	5, 10, 15, 20	5, 10, 15, 20	5	5, 10	
CA_[4A]-46D	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_5B-[66A]-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20	
CA_5A-[66A]-66B	5, 10	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_5A-[66A]-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_5B-[30A]-66A	5, 10	5, 10	5, 10	5, 10, 15, 20	
CA_[7A]-46D	5, 10, 15, 20	20	20	20	B46 SCC Only
CA_[7A]-46D (1)	5, 10, 15, 20	10, 20	10, 20	20	B46 SCC Only
CA_13A-[66A]-66B	5, 10	5, 10, 15, 20	5, 10, 15	5, 10, 15	
CA_13A-[66A]-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	
CA_13A-46C-[66A]	5, 10	20	20	5, 10, 15, 20	B46 SCC Only
CA_[41A]-41D	5, 10, 15, 20	10, 15, 20	10, 15, 20	10, 15, 20	
CA_46D-[66A]	20	20	20	5, 10, 15, 20	B46 SCC Only
CA_46C-[66A]-66A	20	20	5, 10, 15, 20	5, 10, 15, 20	B46 SCC Only

UL CA Checklist							

1	FCC ID:		**BCGA1934**				
2	References to Standards						
a)	LTE release and version numbers of the 3GPP documents used to implement the specific device(s):		Release 13, March 2016 Version				
b)	3GPP release and version numbers required for power measurements and RF test setup conditions:		Release 13, March 2016 Version				
3		When Carrier Aggregation applies, explanations of Inter-band and intra-band aggregation Capabilities					
c)	Uplink Carrier Aggregation Supported?		Yes				
i)		Frequency bands and channel bandwidths allowed for the uplink and downlink configuration combinations					

CA_7C (1) UL CA

Configuration	Supported Channel Bandwidth [MHz]					Restriction
	CC1	CC2	CC3	CC4	CC5	
CA_7C (1)	10, 15, 20	10, 15, 20	-	-	-	

CA_41C (1) UL CA

Configuration	Supported Channel Bandwidth [MHz]					Restriction
	CC1	CC2	CC3	CC4	CC5	
CA_41C (1)	5, 10, 15, 20	5, 10, 15, 20	-	-	-	

ii) ULCA with the following additional DLCA configurations

General restriction:
+ All uplink operations for all configurations are limited to CA_7C and CA_41C only

Configuration	Supported Channel Bandwidth [MHz]					Restriction
	CC1	CC2	CC3	CC4	CC5	
CA_41C-41A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	-	-	
CA_41D	10, 15, 20	10, 15, 20	10, 15, 20	-	-	
CA_41D-41A	10, 15, 20	10, 15, 20	10, 15, 20	5, 10, 15, 20	-	
CA_41C-41C	10, 15, 20	10, 15, 20	10, 15, 20	10, 15, 21	-	
CA_41E	15, 20	15, 20	15, 20	20	-	
CA_41C-41D	10, 15, 20	10, 15, 20	10, 15, 20	10, 15, 20	10, 15, 20	

Note: [CC] indicates CC with 4x4 MIMO DL Antenna Configuration

General restrictions:
+ All uplink operations for all configurations are limited to CA_7C and CA_41C only
+ 4x4 MIMO Antenna configuration is limited to DL only.

Configuration	Supported Channel Bandwidth [MHz]					Restriction
	CC1	CC2	CC3	CC4	CC5	
CA_[41C] (1)	5, 10, 15, 20	5, 10, 15, 20	-	-	-	
CA_[41C]-41A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	-	-	
CA_41C-[41A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	-	-	
CA_41D-[41A]	10, 15, 20	10, 15, 20	10, 15, 20	5, 10, 15, 20	-	
CA_[7C] (1)	10, 15, 20	10, 15, 20	-	-	-	