3GPP TSG RAN WG4 #87e RP-200510

Electronic Meeting, March 16-19, 2 (revision of RP-200491; latest approved WID RP-192586)

**Source: LG Electronics**

**Title: Revised WID on Rel-16 LTE inter-band Carrier Aggregation for x bands DL   
(x= 3, 4, 5) with 2 bands UL**

**Document for: Approval**

**Agenda Item: 10.3.1**

3GPP™ Work Item Description

For guidance, see [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39; and [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm).  
Information about Work Items can be found at <http://www.3gpp.org/Work-Items>

# Title: Revised WID on Rel-16 LTE inter-band Carrier Aggregation for x bands DL (x= 3, 4, 5) with 2 bands UL

## Acronym: LTE\_CA\_R16\_xBDL\_2BUL

## Unique identifier: 800165

NOTE: For new WIs/SIs leave the Unique identifier empty or you can make a proposal for an Acronym.

If this is a RAN WID including Core and Perf. part, then Title, Acronym and Unique identifier refer to the feature WI.

Please tick (X) the applicable box(es) in the table below:

Either:

|  |  |
| --- | --- |
| **This WID includes a Core part** | **X** |
| **This WID includes a Performance part** | **X** |

## 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Affects:** | UICC apps | ME | AN | CN | Others (specify) |
| **Yes** |  | X | X |  |  |
| **No** | X |  |  | X | X |
| **Don't know** |  |  |  |  |  |

## 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

This work item is a … *{Tick one box. "***Feature** */* **Building Block** */ Work Task" form a hierarchical structure. E.g. no Building Block can be proposed without a corresponding parent Feature. The full structure of all existing Work Items is shown in the 3GPP Work Plan in* [*ftp://ftp.3gpp.org/Information/WORK\_PLAN*](ftp://ftp.3gpp.org/Information/WORK_PLAN) *}*

|  |  |
| --- | --- |
|  | Feature |
| X | Building Block |
|  | *Work Task* |
|  | Study Item |

NOTE: Normally, Core/Perf./Testing parts in RAN WIDs are Building Blocks. Only if they are under an SA or CT umbrella, we define them as work tasks. If you are in doubt, please contact MCC.

### 2.2 Parent and child Work Items

*{For a* **Feature***: list here the children* **Building Blocks** *(optional) and* Work Tasks *(optional)}*

*{For a* **Building Block***: list here the parent* **Feature** *(mandatory) and children* Work Tasks *(optional)}*

*{For a* Work Task*: list here the parent* **Building Block** *(mandatory)}*

|  |  |  |
| --- | --- | --- |
| Parent and child Work Items | | |
| Unique ID | Title | Nature of relationship |
|  | New WID on Rel16 LTE inter-band CA for x bands DL with 2 bands UL CA with x=3, 4, 5 | Parent WID |

NOTE: RAN agreed some time ago, that it describes the feature WI + Core/Perf. part WI or Testing part WI in one WID. Therefore the table above should just include the feature WI Unique ID and title and Nature of relationship is "parent WID".

### 2.3 Other related Work Items and dependencies

*{List here other Work Items which relate to the proposed one but are not part of the hierarchical structure, such as preceding SI or a preceding WI (e.g. if you further enhance a topic).}*

|  |  |  |
| --- | --- | --- |
| Other related Work Items (if any) | | |
| Unique ID | Title | Nature of relationship |
|  | Core part: New WID on Rel16 LTE inter-band CA for x bands DL with 2 bands UL with x=3, 4, 5 | Child WID |
|  | Perf. part: New WID on Rel16 LTE inter-band CA for 2 bands DL with 2 bands UL with x=3, 4, 5 | Child WID |

NOTE: Also related or dependent WIs in other TSGs should be indicated.

## 3 Justification

All new LTE inter band CA configurations for x bands DL with 2 bands UL with x=3, 4, 5 will be defined under this WI. New configurations still emerge from exiting bands and whenever new band is specified, it will create a potential for several new LTE inter band CA configurations for x bands DL with 2 bands UL with x=3, 4, 5.

LTE inter band CA configurations for x bands DL with 2 bands UL with x=3, 4, 5 will be introduced in a release independent manner based on TS36.307, which will be updated depending on newly introduced CA configurations.

The precondition to propose x bands DL with 2 bands UL with x=3, 4, 5 in rel-16 is as follows.

* Constituent LTE inter band CA for x bands DL with 1 band UL shall be specified in advance.
* Each of the four paired CA configurations of 2 bands DL with 2 bands UL used in a certain x bands DL with 2 bands UL with x=3, 4, 5 shall be specified in advance.
* Example: If the following CA configuration is proposed and related operator request to specify the all possible UL CA configurations,

|  |  |
| --- | --- |
| E-UTRA Downlink CA Configuration | E-UTRA Uplink CA Configuration |
| CA\_1A-2A-3A | CA\_1A-2A, CA\_1A-3A\_CA\_2A-3A |

Then,

* Inter-band LTE DL CA of 3 bands with 1 UL band of CA\_1A-2A-3A shall be specified in advance.
* Inter-band LTE DL CA 2 bands with UL CA 2 bands of CA\_1A-2A, CA\_1A-3A and CA\_2A-3A shall be specified in advance except supplementary DL only band.

## 4 Objective

### 4.1 Objective of SI or Core part WI or Testing part WI

Potential self-interference issues for paring 2 bands UL and x bands DL shall be studied.

Define necessary modifications to core Rx requirements..

* General for all x bands DL with 2 bands UL pairs
  + Specify common RF requirements for inter-band carrier aggregation.
  + Discuss the impact of supporting all of the paired x bands DL with 2 bands UL configurations (in total, potentially the number of the paired configuration is xC2 at maximum) belonging to for a certain x bands DL with 2 bands UL configuration on UE implementation and network capacity/planning to figure out pros and cons.
    - Note that the discussion itself does not affect the completion of individual x bands DL with 2 bands UL configurations with x=3, 4, 5.
* For individual x bands DL with 2 bands UL pairs
  + Analyse the impact of 2UL harmonic/IMD of respective CA band combinations.
  + In case 2UL creates self-desensitization issues for certain bands DL, define MSD requirements and test cases
* Add conformance testing in RAN5 specifications (to follow at a later stage)

of all REL-16 CA combinations that fall into the category defined by the WI title. An overview table of these CA combinations is provided here:

CA configurations for 3 bands DL with 2 bands UL

Table 1-1: Individual combination names, proponents and supporting companies for each CA band combinations

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Combi**  **nation** | **#**  **CC for DL** | **CA configurations**  **\*Unless otherwise stated, the number of UL CC is one.** | **REL-indep.**  **from** | **contact**  **name, company** | **contact**  **email** | **other supporting companies**  **(min. 3)** | **status**  **(new, ongoing, completed, stopped)** | **supported next level fallback modes (in DL and UL)** |
| 3-11-18 | 3 | 3BDL\_3A-11A-18A\_2BUL\_CA\_3A-11A\_BCS0 | REL-11 | Xiao Shao,  KDDI | ko-shou@kddi.com | Anritsu, Ericsson, Nokia, Samsung, Sumitomo | completed | 3B\_3CC\_DL\_3A-11A-18A\_BCS0-completed  2B\_2CC\_DL\_3A-11A\_2B\_2CC\_UL\_3A-11A\_BCS0-new |
| 3-11-26 | 3 | 3BDL\_3A-11A-26A\_2BUL\_CA\_3A-11A\_BCS0 | REL-11 | Xiao Shao,  KDDI | ko-shou@kddi.com | Anritsu, Ericsson, Nokia, Samsung, Sumitomo | completed | 3B\_3CC\_DL\_3A-11A-26A\_BCS0-completed  2B\_2CC\_DL\_3A-11A\_2B\_2CC\_UL\_3A-11A\_BCS0-new |
| 1-3-42 | 4 | 3BDL\_1A-3A-42C\_2BUL\_CA\_1A-42C\_BCS0 | REL-12 | Xiao Shao,  KDDI | ko-shou@kddi.com | Huawei, Hisilicon, Sumitomo | completed | 3B\_4CC\_ DL\_1A-3A-42C\_2BB\_2CC\_UL\_1A-42A\_BCS0-completed  2B\_3CC\_ DL\_1A-42C\_2BB\_3CC\_UL\_1A-42C\_BCS0-completed |
| 1-3-42 | 4 | 3BDL\_1A-3A-42C\_2BUL\_CA\_3A-42C\_BCS0 | REL-12 | Xiao Shao,  KDDI | ko-shou@kddi.com | Huawei, Hisilicon, Sumitomo | completed | 3B\_4CC\_ DL\_1A-3A-42C\_2BB\_2CC\_UL\_3A-42A\_BCS0-completed  2B\_3CC\_ DL\_3A-42C\_2BB\_3CC\_UL\_3A-42C\_BCS0-completed |
| 2-4-13 | 3 | 3BDL\_2A-4A-13A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | Completed\_3BDL\_2A-4A-13A\_1BUL\_2A\_BCS0  Completed\_3BDL\_2A-4A-13A\_1UL\_13A\_BCS0 |
| 2-4-13 | 3 | 3BDL\_2A-4A-13A\_2BUL\_4A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | Completed\_3BDL\_2A-4A-13A\_1BUL\_4A\_BCS0  Completed\_3BDL\_2A-4A-13A\_1BUL\_13A\_BCS0 |
| 2-4-5 | 4 | 3BDL\_2A-2A-4A-5A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | Completed\_3BDL\_2A-2A-4A-5A\_1BUL\_2A\_BCS0  Completed\_3BDL\_2A-2A-4A-5A\_1BUL\_5A\_BCS0 |
| 2-4-5 | 4 | 3BDL\_2A-2A-4A-5A\_2BUL\_4A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | Completed\_3BDL\_2A-2A-4A-5A\_1BUL\_4A\_BCS0  Completed\_3BDL\_2A-2A-4A-5A\_1BUL\_5A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-2A-5A-66A-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-2A-5A-66A-66A\_1UL\_2A\_BCS0  CA\_5DL\_2A-2A-5A-66A-66A\_1UL\_5A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-5B-66A-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-5B-66A-66A\_1UL\_2A\_BCS0  CA\_5DL\_2A-5B-66A-66A\_1UL\_5A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-5B-66A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-5B-66A-66A\_1UL\_5A\_BCS0  CA\_5DL\_2A-5B-66A-66A\_1UL\_66A\_BCS0 |
| 2-5-46 | 5 | 3BDL\_2A-5A-46D\_2BUL \_2A-5A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-2A-5A-66A-66A\_1UL\_2A\_BCS0  CA\_5DL\_2A-2A-5A-66A-66A\_1UL\_5A\_BCS0 |
| 5-46-66 | 5 | 3BDL\_5A-46D-66A\_2BUL\_5A\_46A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_5A-46D-66A\_1UL\_5A\_BCS0  CA\_5DL\_5A-46D-66A\_1UL\_46A\_BCS0 |
| 5-46-66 | 5 | 3BDL\_5A-46D-66A\_2BUL\_5A\_66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_5A-46D-66A\_1UL\_5A\_BCS0  CA\_5DL\_5A-46D-66A\_1UL\_66A\_BCS0 |
| 2-13-66 | 5 | 3BDL\_2A-13A-66A-66B\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-13A-66A-66B\_1UL\_2A\_BCS0  CA\_5DL\_2A-13A-66A-66B\_1UL\_13A\_BCS0 |
| 2-13-66 | 5 | 3BDL\_2A-13A-66A-66B\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-13A-66A-66B\_1UL\_13A\_BCS0  CA\_5DL\_2A-13A-66A-66B\_1UL\_66A\_BCS0 |
| 2-13-48 | 5 | 3BDL\_2A-13A-48A-48C\_2UL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-13A-48A-48C\_1UL\_2A\_BCS0  CA\_5DL\_2A-13A-48A-48C\_1UL\_13A\_BCS0 |
| 13-46-66 | 5 | 3BDL\_13A-46D-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_13A-46D-66A\_1UL\_13A\_BCS0  CA\_5DL\_13A-46D-66A\_1UL\_66A\_BCS0 |
| 2-13-46 | 5 | 3BDL\_2A-13A-46D\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-13A-46D\_1UL\_2A\_BCS0  CA\_5DL\_2A-13A-46D\_1UL\_13A\_BCS0 |
| 1-3-38 | 3 | CA\_3BDL\_1A-3A-38A\_2BUL\_ 1A-3A\_BCS0 | REL-11 | Zhangpeng,  Huawei | zhangpeng169@huawei.com | Deutsche Telekom, Hisilicon, T-mobile | completed | Completed: CA\_3DL\_1A-3A-38A\_1UL\_BCS0  Completed: CA\_2DL\_1A-3A\_2UL 1A-3A\_BCS0 |
| 2-12-66 | 3 | CA\_3BDL\_2A-12A-66A\_2BUL\_2A-12A\_BCS0 | REL-11 | Nelson Ueng, T-Mobile USA | nelson.ueng@T-Mobile.com | Ericsson, Nokia, Deutsche Telekom, Samsung | completed | Completed: CA\_3DL\_2A-12A-66A\_1UL\_BCS0  Completed: CA\_2DL\_2A-12A\_2UL\_2A-12A\_BCS0 |
| 2-12-66 | 3 | CA\_3BDL\_2A-12A-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Nelson Ueng, T-Mobile USA | nelson.ueng@T-Mobile.com | Ericsson, Nokia, Deutsche Telekom, Samsung | completed | Completed: CA\_3DL\_2A-12A-66A\_1UL\_BCS0  Completed: CA\_2DL\_2A-66A\_2UL\_2A-66A\_BCS0 |
| 2-12-66 | 3 | CA\_3BDL\_2A-12A-66A\_2BUL\_12A-66A\_BCS0 | REL-11 | Nelson Ueng, T-Mobile USA | nelson.ueng@T-Mobile.com | Ericsson, Nokia, Deutsche Telekom, Samsung | completed | Completed: CA\_3DL\_2A-12A-66A\_1UL\_BCS0  Completed: CA\_2DL\_12A-66A\_2UL\_12A-66A\_BCS0 |
| 1-3-42 | 5 | CA\_3BDL\_1A-3A-42D\_2BUL\_ 1A-3A\_BCS0 | REL-12 | Yuta Oguma, NTT DOCOMO | yuuta.oguma.yt@nttdocomo.com | Fujitsu, NEC, Nokia | completed | CA\_5DL\_1A-3A-42D\_BCS0(New)  CA\_4DL\_1A-3A-42C\_2UL\_ 1A-3A\_BCS0(Completed) |
| 1-3-42 | 5 | CA\_3BDL\_1A-3A-42D\_2UL\_ 1A-42A\_BCS0 | REL-12 | Yuta Oguma, NTT DOCOMO | [yuuta.oguma.yt@nttdocomo.com](mailto:yuuta.oguma.yt@nttdocomo.com) | Fujitsu, NEC, Nokia | completed | CA\_5DL\_1A-3A-42D\_BCS0(Ongoing)  CA\_4DL\_1A-3A-42C\_2UL\_ 1A-42A\_BCS0(Completed) |
| 1-3-42 | 5 | CA\_3BDL\_1A-3A-42D\_2UL\_ 3A-42A\_BCS0 | REL-12 | Yuta Oguma, NTT DOCOMO | [yuuta.oguma.yt@nttdocomo.com](mailto:yuuta.oguma.yt@nttdocomo.com) | Fujitsu, NEC, Nokia | completed | CA\_5DL\_1A-3A-42D\_BCS0(Ongoing)  CA\_4DL\_1A-3A-42C\_2UL\_ 3A-42A\_BCS0(Completed) |
| 1-3-42 | 5 | CA\_3BDL\_1A-3A-42D\_2UL\_ 1A-42C\_BCS0 | REL-12 | Yuta Oguma, NTT DOCOMO | [yuuta.oguma.yt@nttdocomo.com](mailto:yuuta.oguma.yt@nttdocomo.com) | Fujitsu, NEC, Nokia | completed | CA\_5DL\_1A-3A-42D\_BCS0(Ongoing)  CA\_4DL\_1A-3A-42C\_2UL\_ 1A-42C\_BCS0(Completed) |
| 1-3-42 | 5 | CA\_3BDL\_1A-3A-42D\_2UL\_ 3A-42C\_BCS0 | REL-12 | Yuta Oguma, NTT DOCOMO | [yuuta.oguma.yt@nttdocomo.com](mailto:yuuta.oguma.yt@nttdocomo.com) | Fujitsu, NEC, Nokia | completed | CA\_5DL\_1A-3A-42D\_BCS0(Ongoing)  CA\_4DL\_1A-3A-42C\_2UL\_ 3A-42C\_BCS0(Completed) |
| 2-5-66 | 3 | 3BDL\_2A-5A-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66A\_BCS0  Completed: 2BDL\_2A-5A\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-2A-5A-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-5A-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-2A-5A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-5A-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-2A-5A-66A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-5A-66A-66A\_BCS0  New: 3BDL\_2A-5A-66A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-2A-5A-66B\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-5A-66B\_BCS0  New: 3BDL\_2A-5A-66B\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-2A-5A-66B\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-5A-66B\_BCS0  New: 3BDL\_2A-5A-66B\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-2A-5A-66C\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-5A-66C\_BCS0  New: 3BDL\_2A-5A-66C\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-2A-5A-66C\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-5A-66C\_BCS0  New: 3BDL\_2A-5A-66C\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 3 | 3BDL\_2A-5A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66A\_BCS0  Completed: 2BDL\_5A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-5A-66A-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66A-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-5A-66A-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66A-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-5A-66B\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66B\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-5A-66B\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66B\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-5A-66C\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66C\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-5A-66C\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66C\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-5B-66A\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5B-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 4 | 3BDL\_2A-5B-66A\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5B-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-5B-66B\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5B-66B\_BCS0  New: 3BDL\_2A-5A-66B\_2BUL\_2A-5A\_BCS0  New: 3BDL\_2A-5B-66A\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-5B-66B\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5B-66B\_BCS0  New: 3BDL\_2A-5A-66B\_2BUL\_5A-66A\_BCS0  New: 3BDL\_2A-5B-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-5B-66C\_2BUL\_2A-5A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5B-66C\_BCS0  New: 3BDL\_2A-5A-66C\_2BUL\_2A-5A\_BCS0  New: 3BDL\_2A-5B-66A\_2BUL\_2A-5A\_BCS0 |
| 2-5-66 | 5 | 3BDL\_2A-5B-66C\_2BUL\_5A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5B-66C\_BCS0  New: 2BDL\_5B-66C\_2BUL\_5A-66A\_BCS0  New: 3BDL\_2A-5A-66C\_2BUL\_5A-66A\_BCS0  New: 3BDL\_2A-5B-66A\_2BUL\_5A-66A\_BCS0 |
| 2-13-66 | 4 | 3BDL\_2A-13A-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66A\_BCS0  Completed: 3BDL\_2A-13A\_2BUL\_2A-13A\_BCS0 |
| 2-13-66 | 3 | 3BDL\_2A-13A-66A\_2BUL\_13A-66A\_BSC0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66A\_BSC0  New: 2BDL\_13A-66A\_2BUL\_13A-66A\_BSC0 |
| 2-13-66 | 4 | 3BDL\_2A-2A-13A-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-13A-66A\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_2A-13A\_BCS0 |
| 2-13-66 | 4 | 3BDL\_2A-2A-13A-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-2A-13A-66A\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-66 | 4 | 3BDL\_2A-13A-66A-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66A-66A\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_2A-13A\_BCS0 |
| 2-13-66 | 4 | 3BDL\_2A-13A-66A-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66A-66A\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-66 | 4 | 3BDL\_2A-13A-66B\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66B\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_2A-13A\_BCS0 |
| 2-13-66 | 4 | 3BDL\_2A-13A-66B\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66B\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-66 | 4 | 3BDL\_2A-13A-66C\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66C\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_2A-13A\_BCS0 |
| 2-13-66 | 4 | 3BDL\_2A-13A-66C\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66C\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_13A-66A\_BCS0 |
| 2-46-48 | 5 | 3BDL\_2A-46E-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-46E-48A\_BCS0  New: 3BDL\_2A-46D-48A\_2BUL\_2A-48A |
| 2-46-48 | 5 | 3BDL\_2A-46D-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-46D-48A\_BCS0 |
| 2-48-66 | 3 | 3BDL\_2A-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed : 3BDL\_2A-48A-66A\_BCS0  New: 2BDL\_48A-66A\_2BUL\_48A-66A |
| 3-8-38 | 3 | 3BDL\_3A-8A-38A\_2BUL\_ 3A-8A\_BCS0 | REL-12 | Zhangpeng,  Huawei | zhangpeng169@huawei.com | Deutsche Telekom, T-Mobile, HiSilicon | completed | 3B\_3CC\_DL\_3A-8A-38A\_BCS0- completed  2B\_2CC\_DL\_3A-38A\_UL\_3A-38A\_BCS0-completed |
| 1-3-5 | 5 | 3BDL\_1A-1A-3C-5A\_2BUL\_ 1A-3A\_BCS0 | REL-12 | Liu Ye, Huawei | [leo.liuye@huawei.com](mailto:leo.liuye@huawei.com) | Vodafone, HiSilicon, Neul, Ericsson, Nokia | completed | 3B\_5CC\_DL\_1A-1A-3C-5A\_BCS0-New  2B\_2CC\_DL\_1A-3A\_UL\_1A-3A\_BCS0-completed |
| 1-3-5 | 5 | 3BDL\_1A-1A-3C-5A\_2BUL\_ 1A-5A\_BCS0 | REL-12 | Liu Ye, Huawei | [leo.liuye@huawei.com](mailto:leo.liuye@huawei.com) | Vodafone, HiSilicon, Neul, Ericsson, Nokia | completed | 3B\_5CC\_DL\_1A-1A-3C-5A\_BCS0-New  2B\_2CC\_DL\_1A-5A\_UL\_1A-5A\_BCS0-completed |
| 1-3-5 | 5 | 3BDL\_1A-1A-3C-5A\_2UL\_3A-5A\_BCS0 | REL-12 | Liu Ye, Huawei | [leo.liuye@huawei.com](mailto:leo.liuye@huawei.com) | Vodafone, HiSilicon, Neul, Ericsson, Nokia | completed | 3B\_5CC\_DL\_1A-1A-3C-5A\_BCS0-New  2B\_2CC\_DL\_3A-5A\_UL\_3A-5A\_BCS0-completed |
| 1-3-28 | 5 | 3BDL\_1A-1A-3C-28A\_2BUL\_ 1A-3A\_BCS0 | REL-12 | Liu Ye, Huawei | [leo.liuye@huawei.com](mailto:leo.liuye@huawei.com) | Vodafone, HiSilicon, Neul, Ericsson, Nokia | completed | 3B\_5CC\_DL\_1A-1A-3C-28A\_BCS0-New  2B\_2CC\_DL\_1A-3A\_UL\_1A-3A\_BCS0-completed |
| 1-3-28 | 5 | 3BDL\_1A-1A-3C-28A\_2BUL\_ 1A-28A\_BCS0 | REL-12 | Liu Ye, Huawei | [leo.liuye@huawei.com](mailto:leo.liuye@huawei.com) | Vodafone, HiSilicon, Neul, Ericsson, Nokia | completed | 3B\_5CC\_DL\_1A-1A-3C-28A\_BCS0-New  2B\_2CC\_DL\_1A-28A\_UL\_1A-28A\_BCS0-completed |
| 1-3-28 | 5 | 3BDL\_1A-1A-3C-28A\_2UL\_ 3A-28A\_BCS0 | REL-12 | Liu Ye, Huawei | [leo.liuye@huawei.com](mailto:leo.liuye@huawei.com) | Vodafone, HiSilicon, Neul, Ericsson, Nokia | completed | 3B\_5CC\_DL\_1A-1A-3C-28A\_BCS0-New  2B\_2CC\_DL\_3A-28A\_UL\_3A-28A\_BCS0-completed |
| 1-3-3-7 | 4 | 3BDL\_1A-3A-3A-7A\_2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, Google, SGS Wireless | completed | 3B\_4CC\_DL\_1A-3A-3A-7A\_BCS0 (completed)  2B\_2CC\_DL\_1A-3A\_2B\_2CC\_UL\_1A-3A\_BCS0 (completed) |
| 1-3-3-7 | 4 | 3BDL\_1A-3A-3A-7A\_2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, Google, SGS Wireless | completed | 3B\_4CC\_DL\_1A-3A-3A-7A\_BCS0 (completed)  2B\_2CC\_DL\_1A-7A\_2B\_2CC\_UL\_1A-7A\_BCS0 (completed) |
| 1-3-3-7 | 4 | 3BDL\_1A-3A-3A-7A\_2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, Google, SGS Wireless | completed | 3B\_4CC\_DL\_1A-3A-3A-7A\_BCS0 (completed)  2B\_2CC\_DL\_3A-7A\_2B\_2CC\_UL\_3A-7A\_BCS0 (completed) |
| 1-3-3-7-7 | 5 | 3BDL\_1A-3A-3A-7A-7A\_2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, Google, SGS Wireless | completed | 3B\_5CC\_DL\_1A-3A-3A-7A-7A\_BCS0 (completed)  2B\_2CC\_DL\_1A-3A\_2B\_2CC\_UL\_1A-3A\_BCS0 (completed) |
| 1-3-3-7-7 | 5 | 3BDL\_1A-3A-3A-7A-7A\_2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, Google, SGS Wireless | completed | 3B\_5CC\_DL\_1A-3A-3A-7A-7A\_BCS0 (completed)  2B\_2CC\_DL\_1A-7A\_2B\_2CC\_UL\_1A-7A\_BCS0 (completed) |
| 1-3-3-7-7 | 5 | 3BDL\_1A-3A-3A-7A-7A\_2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, Google, SGS Wireless | completed | 3B\_5CC\_DL\_1A-3A-3A-7A-7A\_BCS0 (completed)  2B\_2CC\_DL\_3A-7A\_2B\_2CC\_UL\_3A-7A\_BCS0 (completed) |
| 2-14-30 | 3 | 3BDL\_2A-14A-30A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A\_2BUL\_2A-14A\_BCS0 (new) |
| 2-14-30 | 3 | 3BDL\_2A-14A-30A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-30A\_2BUL\_14A-30A\_BCS0 (new) |
| 2-14-66 | 3 | 3BDL\_2A-14A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A\_2BUL\_2A-14A\_BCS0 (new) |
| 2-14-66 | 3 | 3BDL\_2A-14A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-66A\_2BUL\_14A-66A\_BCS0 (new) |
| 14-30-66 | 3 | 3BDL\_14A-30A-66A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-30A\_2BUL\_14A-30A\_BCS0 (new) |
| 14-30-66 | 3 | 3BDL\_14A-30A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-66A\_2BUL\_14A-66A\_BCS0 (new) |
| 2-2-14-66 | 4 | 3BDL\_2A-2A-14A-66A\_2BUL\_2A-14A-BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-2A-14A\_2BUL\_2A-14A\_BCS0 (new)  2A-14A-66A\_2BUL\_2A-14A\_BCS0 (new) |
| 2-2-14-66 | 4 | 3BDL\_2A-2A-14A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-2A-66A\_2BUL\_14A-66A\_BCS0 (new)  2A-14A-66A\_2BUL\_14A-66A\_BCS0 (new) |
| 14-30-66-66 | 4 | 3BDL\_14A-30A-66A-66A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-30A-66A2BUL\_14A-30A\_BCS0 (new) |
| 14-30-66-66 | 4 | 3BDL\_14A-30A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-66A-66A\_2BUL\_14A-66A\_BCS0 (new) |
| 2-14-66-66 | 4 | 3BDL\_2A-14A-66A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A-66A\_2BUL\_2A-14A\_BCS0 (new) |
| 2-14-66-66 | 4 | 3BDL\_2A-14A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-66A-66A\_2BUL\_14A-66A\_BCS0 (new) |
| 2-2-14-66-66 | 5 | 3BDL\_2A-2A-14A-66A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A-66A\_2BUL\_2A-14A\_BCS0 (new)  2A-2A-14A\_2BUL\_2A-14A\_BCS0 (new) |
| 2-2-14-66-66 | 5 | 3BDL\_2A-2A-14A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A-66A\_2BUL\_14A-66A\_BCS0 (new) |
| 2-14-66-66-66 | 5 | 3BDL\_2A-14A-66A-66A-66A\_2BUL\_2A-14A-BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A-66A-66A\_2BUL\_2A-14A-BCS0 (new) |
| 2-14-66-66-66 | 5 | 3BDL\_2A-14A-66A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-66A-66A-66A\_2BUL\_14A-66A\_BCS0 (new) |
| 2-13-46 | 6 | 3BDL\_2A-13A-46A-46D\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_2A-13A-46D\_UL\_2A-13A  NEW: DL\_2A-13A-46C-46A\_UL\_2A-13A  NEW: DL\_2A-46D-46A  NEW: DL\_13A-46D-46A |
| 2-13-46 | 5 | 3BDL\_2A-13A-46A-46C\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_2A-13A-46C-46A  NEW: DL\_13A-46C-46A  NEW: DL\_2A-46C-46A  NEW: DL\_2A-13A-46A-46A\_UL\_2A-13A  NEW: DL\_2A-13A-46C\_UL\_2A-13A |
| 2-13-46 | 4 | 3BDL\_2A-13A-46C\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-13A-46C\_BCS0  COMPLETED: DL\_13A-46C\_BCS0  COMPLETED: DL\_2A-46C\_BCS0  NEW: DL\_2A-13A-46A\_UL\_2A-13A |
| 2-13-46 | 4 | 3BDL\_2A-13A-46A-46A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_2A-13A-46A-46A  NEW: DL\_13A-46A-46A  COMPLETED: DL\_2A-46A-46A\_BCS0  NEW: DL\_2A-13A-46A\_UL\_2A-13A |
| 2-13-46 | 3 | 3DL\_2A-13A-46A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-13A-46A\_BCS0  COMPLETED: DL\_13A-46A\_BCS0 COMPLETED: DL\_2A-46A\_BCS0  COMPLETED: DL\_2A-13A\_UL\_2A-13A\_BCS0 |
| 2-13-46 | 6 | 3DL\_2A-13A-46E\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_2A-13A-46E  COMPLETED: DL\_13A-46E\_BCS0  COMPLETED: DL\_2A-46E\_BCS0  COMPLETED: DL\_2A-13A-46D\_UL\_2A-13A\_BCS0 |
| 2-46-66 | 6 | 3DL\_2A-46E-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46E-66A\_BCS0  COMPLETED: DL\_46E-66A\_BCS0  NEW: DL\_2A-46D-66A\_UL\_2A-66A  COMPLETED: DL\_2A-46E\_BCS0 |
| 2-46-66 | 5 | 3DL\_2A-46D-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_2A-46D-66A  NEW: DL\_46D-66A  NEW: DL\_2A-46C-66A\_UL\_2A-66A  COMPLETED: DL\_2A-46D\_BCS0 |
| 2-46-66 | 4 | 3DL\_2A-46C-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_46C-66A\_BCS0  NEW: DL\_2A-46A-66A\_UL\_2A-66A  COMPLETD: DL\_2A-46C\_BCS0 |
| 2-46-66 | 3 | 3DL\_2A-46A-66A\_2BUL\_2A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46A-66A\_BCS0  COMPLETED: DL\_46A-66A\_BCS0  COMPLETED: DL\_2A-66A\_UL\_2A-66A\_BCS0  COMPLETED: DL\_2A-46A\_BCS0 |
| 2-48-66 | 3 | 3DL\_2A-48A-66A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-48A-66A\_BCS0  NEW: DL\_2A-48A\_UL\_2A-48A  COMPLETED: DL\_2A-66A\_BCS0  COMPLETED: DL\_48A-66A\_BCS0 |
| 13-48-66 | 3 | 3DL\_13A-48A-66A\_2BUL\_13A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_13A-48A\_UL\_13A-48A  COMPLETED: DL\_13A-66A\_BCS0  COMPLETED: DL\_48A-66A\_BCS0 |
| 13-48-66 | 3 | 3DL\_13A-48A-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_13A-48A\_BCS0  NEW: DL\_13A-66A\_UL\_13A-66A  COMPLETED: DL\_48A-66A\_BCS0 |
| 13-48-66 | 3 | 3DL\_13A-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_13A-48A\_BCS0  COMPLETED: DL\_13A-66A\_BCS0  NEW: DL\_48A-66A\_UL\_48A-66A |
| 2-46-48 | 6 | 3DL\_2A-46D-48C\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46D-48C\_BCS0  COMPLETED: DL\_46D-48C\_BCS0  NEW: DL\_2A-46C-48C\_UL\_2A-48A  NEW: DL\_2A-46D-48A\_UL\_2A-48A |
| 46-48-66 | 6 | 3DL\_46D-48C-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_46D-48C-66A\_BCS0  NEW: DL\_46C-48C-66A\_UL\_48A-66A  NEW: DL\_46D-48A-66A\_UL\_48A-66A  COMPLETED: DL\_46D-48C\_BCS0 |
| 2-46-48 | 5 | 3DL\_2A-46C-48C\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46C-48C\_BCS0  NEW: DL\_2A-46A-48C\_UL\_2A-48A  NEW: DL\_2A-46C-48A\_UL\_2A-48A |
| 2-46-48 | 5 | 3DL\_2A-46D-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46D-48A\_BCS0  COMPLETED: DL\_46D-48A\_BCS0  NEW: DL\_2A-46C-48A\_UL\_2A-48A  COMPELTED: DL\_2A-46D\_BCS0 |
| 46-48-66 | 4 | 3DL\_46C-48C-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_46C-48C-66A­\_BCS0  NEW: DL\_46A-48C-66A\_UL\_48A-66A  NEW: DL\_46C-48A-66A\_UL\_48A-66A |
| 46-48-66 | 4 | 3DL\_46A-48C-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_46A-48C-66A\_BCS0 NEW: DL\_48C-66A\_UL\_48A-66A  NEW: DL\_46A-48A-66A\_UL\_48A-66A |
| 46-48-66 | 5 | 3DL\_46D-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_46D-48A-66A\_BCS0  NEW: DL\_46A-48A-66A\_UL\_48A-66A  COMPLETED: DL\_46D-66A\_BCS0 |
| 2-48-66 | 4 | 3DL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-48C-66A\_BCS0 NEW: 48C-66A\_UL\_48A-66A  NEW: DL\_2A-48A-66A\_UL\_48A-66A  COMPELTED: DL\_2A-48C\_BCS0 |
| 2-48-66 | 4 | 3DL\_2A-48C-66A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-48C-66A\_BCS0  COMPLETED: DL\_48C-66A\_BCS0  NEW: DL\_2A-48A-66A\_UL\_2A-48A  NEW: DL\_2A-48C\_UL\_2A-48A |
| 2-46-48 | 4 | 3DL\_2A-46A-48C\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46A-48C\_BCS0  NEW: DL\_2A-48C\_UL\_2A-48A  COMPLETED: DL\_2A-46A-48A\_BCS0 |
| 2-46-48 | 4 | 3DL\_2A-46C-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46C-48A\_BCS0  NEW: DL\_2A-46A-48A-UL\_2A-48A  COMPLETED: DL\_2A-46C\_BCS0 |
| 2-46-48 | 3 | 3DL\_2A-46A-48A\_2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46A-48A\_BCS0  NEW: DL\_2A-48A\_UL\_2A-48A  COMPLETED: DL\_2A-46A\_BCS0 |
| 46-48-66 | 4 | 3DL\_46C-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_46C-48A-66A\_BCS0  NEW: DL\_46A-48A-66A\_UL\_48A-66A\_BCS0  COMPLETED: DL\_46C-66A\_BCS0 |
| 46-48-66 | 3 | 3DL\_46A-48A-66A\_2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_46A-48A-66A\_BCS0  NEW: DL\_48A-66A\_UL\_48A-66A  COMPLETED: DL\_46A-66A\_BCS0 |
| 1-7-20 | 3 | 3DL\_1A-7A-20A\_2BUL\_1A-7A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-7A-20A  (completed) DL\_1A-7A  (completed) DL\_1A-20A  (completed) DL\_7A-20A  (completed) DL\_1A-7A\_UL\_1A-7A |
| 1-7-20 | 3 | 3DL\_1A-7A-20A\_2BUL\_1A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-7A-20A  (completed) DL\_1A-7A  (completed) DL\_1A-20A  (completed) DL\_7A-20A  (completed) DL\_1A-20A\_UL\_1A-20A |
| 1-7-20 | 3 | 3DL\_1A-7A-20A\_2BUL\_7A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-7A-20A  (completed) DL\_1A-7A  (completed) DL\_1A-20A  (completed) DL\_7A-20A  (completed) DL\_7A-20A\_UL\_7A-20A |
| 1-3-8 | 3 | 3DL\_1A-3A-3A-8A\_2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-8A\_UL\_1A-3A  (completed) DL\_1A-3A-3A\_UL\_1A-3A |
| 1-3-8 | 3 | 3DL\_1A-3A-3A-8A\_2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-8A\_UL\_1A-8A |
| 1-3-8 | 3 | 3DL\_1A-3A-3A-8A\_2BUL\_3A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-8A\_UL\_3A-8A  (completed) DL\_3A-3A-8A\_UL\_3A-8A |
| 1-7-8 | 3 | 3DL\_1A-7A-8A\_2BUL\_ 7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_7A-8A\_UL\_7A-8A |
| 1-7-8 | 3 | 3DL\_1A-7A-8A\_2BUL\_ 7A-8A\_BCS1 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_7A-8A\_UL\_7A-8A |
| 1-7-8 | 4 | 3DL\_1A-7A-7A-8A\_2BUL\_ 1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-7A-8A\_UL\_1A-7A  (ongoing) DL\_1A-7A-7A\_UL\_1A-7A |
| 1-7-8 | 4 | 3DL\_1A-7A-7A-8A\_2BUL\_ 1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-7A-8A\_UL\_1A-8A |
| 1-7-8 | 4 | 3DL\_1A-7A-7A-8A\_2BUL\_ 7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (ongoing) DL\_1A-7A-8A\_UL\_7A-8A  (completed) DL\_7A-7A-8A\_UL\_7A-8A |
| 2-48-66 | 4 | 3BDL\_2A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48A-66A-66A\_BCS0  Completed: 3BDL\_2A-48A-66A\_2BUL\_48A-66A\_BCS0  Completed: 2BDL\_48A-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-48-66 | 4 | 3BDL\_2A-48A-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48A-66A-66A\_BCS0  Completed: 3BDL\_2A-48A-66A\_2BUL\_2A-48A\_BCS0 |
| 2-48-66 | 4 | 3BDL\_2A-48A-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48A-66A-66A\_BCS0  Completed: 2BDL\_2A-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48A-66A\_2BUL\_2A-66A\_BCS0 |
| 2-48-66 | 5 | 3BDL\_2A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48D-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0  Completed: 2BDL\_48D-66A\_2BUL\_48A-66A\_BCS0 |
| 2-48-66 | 5 | 3BDL\_2A-48D-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48D-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_2A-66A\_BCS0 |
| 2-48-66 | 5 | 3BDL\_2A-48D-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48D-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_2A-48A\_BCS0  Completed: 2BDL\_2A-48D\_2BUL\_2A-48A\_BCS0 |
| 2-48-66 | 5 | 3BDL\_2A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48C-66A-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48A-66A-66A\_2BUL\_48A-66A\_BCS0  Completed: 2BDL\_48C-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-48-66 | 5 | 3BDL\_2A-48C-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48C-66A-66A\_BCS0  New: 3BDL\_2A-48A-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48A-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48A-66A-66A\_2BUL\_2A-48A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_2A-66A\_BCS0 |
| 2-48-66 | 5 | 3BDL\_2A-48C-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48C-66A-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_2A-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-48A-66A-66A\_2BUL\_2A-48A\_BCS0 |
| 2-48-66 | 6 | 3BDL\_2A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48D-66A-66A\_BCS0  New: 3BDL\_2A-48C-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_48A-66A\_BCS0  New: 2BDL\_48D-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-48-66 | 6 | 3BDL\_2A-48D-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48D-66A-66A\_BCS0  New: 3BDL\_2A-48C-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48C-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48C-66A-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_2A-66A\_BCS0 |
| 2-48-66 | 6 | 3BDL\_2A-48D-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48D-66A-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-48C-66A-66A\_2BUL\_2A-48A\_BCS0 |
| 2-48-66 | 6 | 3BDL\_2A-48E-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48E-66A\_BCS0  Completed: 2BDL\_48E-66A\_2BUL\_48A-66A\_BCS0 |
| 2-48-66 | 6 | 3BDL\_2A-48E-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48E-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_2A-48A\_BCS0 |
| 2-48-66 | 6 | 3BDL\_2A-48E-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48E-66A\_BCS0  Completed:2BDL\_2A-48E\_2BUL\_2A-48A\_BCS0 |
| 2-48-66 | 7 | 3BDL\_2A-48E-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48E-66A-66A\_BCS0  New: 2BDL\_48E-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-48-66 | 7 | 3BDL\_2A-48E-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48E-66A-66A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_2A-48A\_BCS0 |
| 2-48-66 | 7 | 3BDL\_2A-48E-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-48E-66A-66A\_BCS0  New: 3BDL\_2A-48E-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48E-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48E-66A\_2BUL\_2A-48A\_BCS0 |
| 2-13-66 | 3 | 3BDL\_2A-13A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-66A\_BCS0  Completed: 2BDL\_13A-66A\_2BUL\_13A-66A\_BCS0  Completed: 2BDL\_2A-66A\_2BUL\_2A-66A\_BCS0  Completed: 2BDL\_2A-13A\_2BUL\_2A-13A\_BCS0 |
| 2-13-48 | 3 | 3BDL\_2A-13A-48A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-48A\_BCS0  Completed: 2BDL\_2A-48A\_2BUL\_2A-48A\_BCS0 |
| 2-13-48 | 3 | 3BDL\_2A-13A-48A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | 3BDL\_2A-13A-48A\_BCS0  New: 2BDL\_13A-48A\_2BUL\_13A-48A\_BCS0 |
| 2-48-66 | 3 | 3BDL\_2A-48A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-48A-66A\_BCS0  Completed: 2BDL\_2A-66A\_2BUL\_2A-66A\_BCS0 |
| 13-48-66 | 4 | 3BDL\_13A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_13A-48A-66A-66A\_BCS0  Completed: 2BDL\_48A-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 13-48-66 | 4 | 3BDL\_13A-48A-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_13A-48A-66A-66A\_BCS0  Completed: 2BDL\_13A-66A-66A\_2BUL\_13A-66A\_BCS0 |
| 13-48-66 | 4 | 3BDL\_13A-48A-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_13A-48A-66A-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_13A-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_13A-48A\_BCS0 |
| 13-48-66 | 4 | 3BDL\_13A-48C-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_13A-48C-66A\_BCS0  Completed: 2BDL\_48C-66A\_2BUL\_48A-66A\_BCS0 |
| 13-48-66 | 4 | 3BDL\_13A-48C-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_13A-48C-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_13A-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_13A-48A\_BCS0 |
| 13-48-66 | 4 | 3BDL\_13A-48C-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_13A-48C-66A\_BCS0  New: 2BDL\_13A-48C\_2BUL\_13A-48A\_BCS0 |
| 2-13-48 | 4 | 3BDL\_2A-13A-48C\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-48C\_BCS0  Completed: 2BDL\_2A-48C\_2BUL\_2A-48A\_BCS0 |
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| 2-13-48 | 4 | 3BDL\_2A-13A-48C\_2BUL\_2A-13A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-48C\_BCS0  New: 3BDL\_2A-13A-48A\_2BUL\_2A-13A\_BCS0 |
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| 13-48-66 | 5 | 3BDL\_13A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_13A-48D-66A\_BCS0  Completed: 2BDL\_48D-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48C-66A\_2BUL\_48A-66A\_BCS0 |
| 13-48-66 | 5 | 3BDL\_13A-48D-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_13A-48D-66A\_BCS0  New: 2BDL\_13A-48D\_2BUL\_13A-48A\_BCS0  New: 3BDL\_13A-48C-66A\_2BUL\_13A-48A\_BCS0 |
| 13-48-66 | 5 | 3BDL\_13A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_13A-48C-66A-66A\_BCS0  New: 3BDL\_13A-48C-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48A-66A-66A\_2BUL\_48A-66A\_BCS0  Completed: 2BDL\_48C-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 13-48-66 | 5 | 3BDL\_13A-48C-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_13A-48C-66A-66A\_BCS0  New: 3BDL\_13A-48C-66A\_2BUL\_13A-66A\_BCS0  New: 3BDL\_13A-48A-66A-66A\_2BUL\_13A-66A\_BCS0 |
| 13-48-66 | 5 | 3BDL\_13A-48C-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_13A-48C-66A-66A\_BCS0  New: 3BDL\_13A-48C-66A\_2BUL\_13A-48A\_BCS0  New: 3BDL\_13A-48A-66A-66A\_2BUL\_13A-48A\_BCS0 |
| 2-13-48 | 5 | 3BDL\_2A-13A-48D\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-48D\_BCS0  New: 3BDL\_2A-13A-48C\_2BUL\_13A-48A\_BCS0  New: 2BDL\_13A-48D\_2BUL\_13A-48A\_BCS0 |
| 2-13-48 | 5 | 3BDL\_2A-13A-48D\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-48D\_BCS0  New: 3BDL\_2A-13A-48C\_2BUL\_2A-48A\_BCS0  Completed: 2BDL\_2A-48D\_2BUL\_2A-48A\_BCS0 |
| 13-48-66 | 6 | 3BDL\_13A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_13A-48D-66A-66A\_BCS0  New: 3BDL\_13A-48C-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48D-66A\_2BUL\_48A-66A\_BCS0  New: 2BDL\_48D-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 13-48-66 | 6 | 3BDL\_13A-48D-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_13A-48D-66A-66A\_BCS0  New: 3BDL\_13A-48C-66A-66A\_2BUL\_13A-66A\_BCS0 |
| 13-48-66 | 6 | 3BDL\_13A-48D-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_13A-48D-66A-66A\_BCS0  New: 3BDL\_13A-48C-66A-66A\_2BUL\_13A-48A\_BCS0  New: 3BDL\_13A-48D-66A\_2BUL\_13A-48A\_BCS0 |
| 5-48-66 | 3 | 3BDL\_5A-48A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_5A-48A-66A\_BCS0  Completed: 2BDL\_48A-66A\_2BUL\_48A-66A\_BCS0 |
| 5-48-66 | 3 | 3BDL\_5A-48A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_5A-48A-66A\_BCS0  Completed: 2BDL\_5A-66A\_2BUL\_5A-66A\_BCS0 |
| 5-48-66 | 3 | 3BDL\_5A-48A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_5A-48A-66A\_BCS0  New: 2BDL\_5A-48A\_2BUL\_5A-48A\_BCS0 |
| 2-5-66 | 3 | 3BDL\_2A-5A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66A\_BCS0  Completed: 2BDL\_2A-66A\_2BUL\_2A-66A\_BCS0 |
| 2-5-48 | 3 | 3BDL\_2A-5A-48A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-5A-48A\_BCS0  Completed: 2BDL\_2A-48A\_2BUL\_2A-48A\_BCS0 |
| 2-5-48 | 3 | 3BDL\_2A-5A-48A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-5A-48A\_BCS0  New: 2BDL\_5A-48A\_2BUL\_5A-48A\_BCS0 |
| 5-48-66 | 4 | 3BDL\_5A-48C-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48C-66A\_BCS0  Completed: 3BDL\_5A-48A-66A\_2BUL\_48A-66A\_BCS0  Completed: 2BDL\_48C-66A\_2BUL\_48A-66A\_BCS0 |
| 5-48-66 | 4 | 3BDL\_5A-48C-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48C-66A\_BCS0  New: 3BDL\_5A-48A-66A\_2BUL\_5A-66A\_BCS0 |
| 5-48-66 | 4 | 3BDL\_5A-48C-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48C-66A\_BCS0  New: 2BDL\_5A-48C\_2BUL\_5A-48A\_BCS0  New: 3BDL\_5A-48A-66A\_2BUL\_5A-48A\_BCS0 |
| 5-48-66 | 4 | 3BDL\_5A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_5A-48A-66A-66A\_BCS0  New: 3BDL\_5A-48A-66A\_2BUL\_48A-66A\_BCS0  Completed: 2BDL\_48A-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 5-48-66 | 4 | 3BDL\_5A-48A-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_5A-48A-66A-66A\_BCS0  New: 3BDL\_5A-48A-66A\_2BUL\_5A-66A\_BCS0  Completed: 2BDL\_5A-66A-66A\_2BUL\_5A-66A\_BCS0 |
| 5-48-66 | 4 | 3BDL\_5A-48A-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_5A-48A-66A-66A\_BCS0  New: 3BDL\_5A-48A-66A\_2BUL\_5A-48A\_BCS0 |
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| 2-5-66 | 4 | 3BDL\_2A-5A-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-5A-66A-66A\_BCS0  Completed: 2BDL\_2A-66A-66A\_2BUL\_2A-66A\_BCS0 |
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| 5-48-66 | 5 | 3BDL\_5A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48D-66A\_BCS0  New: 3BDL\_5A-48C-66A\_2BUL\_48A-66A\_BCS0  Completed: 2BDL\_48D-66A\_2BUL\_48A-66A\_BCS0 |
| 5-48-66 | 5 | 3BDL\_5A-48D-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48D-66A\_BCS0  New: 3BDL\_5A-48C-66A\_2BUL\_5A-48A\_BCS0  New: 2BDL\_5A-48D\_2BUL\_5A-48A\_BCS0 |
| 5-48-66 | 5 | 3BDL\_5A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48C-66A-66A\_BCS0  New: 3BDL\_5A-48A-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_5A-48C-66A\_2BUL\_48A-66A\_BCS0  Completed: 2BDL\_48C-66A-66A\_2BUL\_48A-66A\_BCS0 |
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| 5-48-66 | 5 | 3BDL\_5A-48C-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48C-66A-66A\_BCS0  New: 3BDL\_5A-48A-66A-66A\_2BUL\_5A-48A\_BCS0  New: 3BDL\_5A-48C-66A\_2BUL\_5A-48A\_BCS0 |
| 2-5-48 | 5 | 3BDL\_2A-5A-48D\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-5A-48D\_BCS0  New: 3BDL\_2A-5A-48C\_2BUL\_2A-5A\_BCS0 |
| 2-5-48 | 5 | 3BDL\_2A-5A-48D\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-5A-48D\_BCS0  New: 3BDL\_2A-5A-48C\_2BUL\_5A-48A\_BCS0  New: 2BDL\_5A-48D\_2BUL\_5A-48A\_BCS0 |
| 2-5-48 | 5 | 3BDL\_2A-5A-48D\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_2A-5A-48D\_BCS0  New: 3BDL\_2A-5A-48C\_2BUL\_2A-48A\_BCS0  Completed: 2BDL\_2A-48D\_2BUL\_2A-48A\_BCS0 |
| 5-48-66 | 6 | 3BDL\_5A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48D-66A-66A\_BCS0  New: 3BDL\_5A-48C-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_5A-48D-66A\_2BUL\_48A-66A\_BCS0  New: 2BDL\_48D-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 5-48-66 | 6 | 3BDL\_5A-48D-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48D-66A-66A\_BCS0  New: 3BDL\_5A-48C-66A-66A\_2BUL\_5A-66A\_BCS0 |
| 5-48-66 | 6 | 3BDL\_5A-48D-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 3BDL\_5A-48D-66A-66A\_BCS0  New: 3BDL\_5A-48C-66A-66A\_2BUL\_5A-48A\_BCS0  New: 3BDL\_5A-48D-66A\_2BUL\_5A-48A\_BCS0 |
| 1-18-41 | 4 | 3BDL\_1A-18A-41C\_2BUL\_CA\_1A-18A\_BCS0 | REL-11 | Li yankun  Samsung | Yankun.li@samsung.com | KDDI, Ericsson, Nokia | New | 3B\_4CC\_DL\_1A-18A-41C\_1B\_1CC\_UL\_1A\_BCS0-New  3B\_4CC\_DL\_1A-18A-41C\_1B\_1CC\_UL\_18A\_BCS0-New  3B\_3CC\_DL\_1A-18A-41A\_2B\_2CC\_UL\_1A-18A\_BCS0-new |
| 1-18-41 | 4 | 3BDL\_1A-18A-41C\_2BUL\_CA\_1A-41A\_BCS0 | REL-11 | Li yankun  Samsung | Yankun.li@samsung.com | KDDI, Ericsson, Nokia | New | 3B\_4CC\_DL\_1A-18A-41C\_1B\_1CC\_UL\_1A\_BCS0-New  3B\_4CC\_DL\_1A-18A-41C\_1B\_1CC\_UL\_41A\_BCS0-New  3B\_3CC\_DL\_1A-18A-41A\_2B\_2CC\_UL\_1A-41A\_BCS0-new  2B\_3CC\_DL\_1A-41C\_2B\_2CC\_UL\_1A-41A\_BCS0-new |
| 1-18-41 | 4 | 3BDL\_1A-18A-41C\_2BUL\_CA\_1A-41C\_BCS0 | REL-11 | Li yankun  Samsung | Yankun.li@samsung.com | KDDI, Ericsson, Nokia | New | 2B\_3CC\_DL\_1A-41C\_1B\_2CC\_UL\_41C\_BCS0-new  2B\_3CC\_DL\_1A-41C\_2B\_3CC\_UL\_1A-41C\_BCS0-new |
| 1-18-41 | 4 | 3BDL\_1A-18A-41C\_2BUL\_CA\_18A-41A\_BCS0 | REL-11 | Li yankun  Samsung | Yankun.li@samsung.com | KDDI, Ericsson, Nokia | New | 3B\_4CC\_DL\_1A-18A-41C\_1B\_1CC\_UL\_18A\_BCS0-New  3B\_4CC\_DL\_1A-18A-41C\_1B\_1CC\_UL\_41A\_BCS0-New  3B\_3CC\_DL\_1A-18A-41A\_2B\_2CC\_UL\_18A-41A\_BCS0-new  2B\_3CC\_DL\_18A-41C\_2B\_2CC\_UL\_18A-41A\_BCS0-new |
| 1-18-41 | 4 | 3BDL\_1A-18A-41C\_2BUL\_CA\_18A-41C\_BCS0 | REL-11 | Li yankun  Samsung | Yankun.li@samsung.com | KDDI, Ericsson, Nokia | New | 2B\_3CC\_DL\_18A-41C\_1B\_2CC\_UL\_41C\_BCS0-new  2B\_3CC\_DL\_18A-41C\_2B\_3CC\_UL\_18A-41C\_BCS0-new |
| 1-18-41 | 3 | 3BDL\_1A-18A-41A\_2BUL\_CA\_1A-18A\_BCS0 | REL-11 | Li yankun  Samsung | Yankun.li@samsung.com | KDDI, Ericsson, Nokia | New | 3B\_3CC\_DL\_1A-18A\_2B\_2CC\_UL\_1A-18A\_BCS0-Completed |
| 1-18-41 | 3 | 3BDL\_1A-18A-41A\_2BUL\_CA\_1A-41A\_BCS0 | REL-11 | Li yankun  Samsung | Yankun.li@samsung.com | KDDI, Ericsson, Nokia | New | 3B\_3CC\_DL\_1A-41A\_2B\_2CC\_UL\_1A-41A\_BCS0-Completed |
| 1-18-41 | 3 | 3BDL\_1A-18A-41A\_2BUL\_CA\_18A-41A\_BCS0 | REL-11 | Li yankun  Samsung | Yankun.li@samsung.com | KDDI, Ericsson, Nokia | New | 3B\_3CC\_DL\_18A-41A\_2B\_2CC\_UL\_18A-41A\_BCS0-new |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CA configuration** | **Uplink Configuration** | **BCS** | **contact**  **name company** | **contact**  **email** | **other supporting companies**  **(min. 3)** | **status**  **(new ongoing completed stopped)** | **supported next level fallback modes (in DL and UL)** |
| CA\_2A-12A-30A | CA\_2A-12A  CA\_2A-30A  CA\_12A-30A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-12A\_UL\_2A-12A  DL\_12A-30A\_UL\_12A\_30A  DL\_2A-30A\_UL\_2A\_30A |
| CA\_2A-12A-66A | CA\_2A-12A  CA\_2A- 66A  CA\_12A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-12A\_UL\_2A-12A  DL\_2A-66A\_UL\_2A-66A  DL\_12A-66A\_UL\_12A-66A |
| CA\_2A-30A-66A | CA\_2A-30A  CA\_2A-66A  CA\_30A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-30A\_UL\_2A-30A  DL\_2A-66A\_UL\_2A-66A  DL\_30A-66A\_UL\_30A-66A |
| CA\_12A-30A-66A | CA\_12A-30A  CA\_12A-66A  CA\_30A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_12A-30A\_UL\_12A-30A  DL\_12A-66A\_UL\_12A-66A  DL\_30A-66A\_UL\_30A-66A |
| CA\_2A-29A-30A | CA\_2A-30A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-30A\_UL\_2A-30A |
| CA\_2A-29A-66A | CA\_2A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-66A\_UL\_2A-66A |
| CA\_29A-30A-66A | CA\_30A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_30A-66A\_UL\_30A-66A |
| CA\_2A-12A-66A-66A | CA\_2A-12A  CA\_2A-66A  CA\_12A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-12A\_UL\_2A-12A  DL\_2A-66A\_UL\_2A-66A  DL\_12A-66A\_UL\_12A-66A |
| CA\_12A-30A-66A-66A | CA\_12A-30A  CA\_12A-66A  CA\_30A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_12A-30A\_UL\_12A-30A  DL\_12A-66A\_UL\_12A-66A  DL\_30A-66A\_UL\_30A-66A |
| CA\_2A-2A-12A-30A | CA\_2A-12A  CA\_2A-30A  CA\_12A-30A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-12A\_UL\_2A-12A  DL\_2A-30A\_UL\_2A-30A  DL\_12A-30A\_UL\_12A-30A |
| CA\_2A-2A-12A-66A | CA\_2A-12A  CA\_2A-66A  CA\_12-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-12A\_UL\_2A\_12A  DL\_2A-66A\_UL\_2A-66A  DL\_12-66A\_UL\_12A-66A |
| CA\_2A-2A-5A-30A | CA\_2A-5A  CA\_2A-30A  CA\_5A-30A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-5A\_UL\_2A-5A  DL\_2A-30A\_UL\_2A-30A  DL\_5A-30A\_UL\_5A-30A |
| 2A-2A-12A-66A-66A | CA\_2A-12A  CA\_2A-66A  CA\_12A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-12A\_UL\_2A-12A  DL\_2A-66A\_UL\_2A-66A  DL\_12A-66A\_UL\_12A-66A |

Bandwidth combination set for CA configuration

Table 1-2 Bandwidth combinations for 3 bands DL/2 bands UL CA band combinations

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| E-UTRA CA configuration / Bandwidth combination set | | | | | | | | | | | | | | | | | | | | | | | |
| E-UTRA CA Configuration | Uplink CA configurations | E-UTRA Bands | 1.4 MHz | 3 MHz | | | | | 5 MHz | | | | | 10 MHz | | | | 15 MHz | | | 20 MHz | Maximum aggregated bandwidth  [MHz] | Bandwidth combination set |
| CA\_3A-11A-18A | CA\_3A-11A | 3 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 45 | 0 |
| 11 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| 18 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | |  |
| CA\_3A-11A-26A | CA\_3A-11A | 3 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 45 | 0 |
| 11 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| 26 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | |  |
| CA\_1A-3A-42C | CA\_1A-42C  CA\_3A-42C | 1 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 80 | 0 |
| 3 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| 42 | See CA\_42C Bandwidth combination set 0 in Table 5.6A.1-1 in TS36.101 | | | | | | | | | | | | | | | | | | |
| CA\_2A-4A-13A | CA\_2A-13A  CA\_4A-13A | 2 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 50 | 0 |
| 4 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| 13 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| CA\_2A-2A-4A-5A | CA\_2A-5A  CA\_4A-5A | 2 | See CA\_2A-2A Bandwidth combination set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | | 70 | 0 |
| 4 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| 5 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| CA\_2A-2A-5A-66A-66A | CA\_2A-5A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | | 90 | 0 |
| 5 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-5B-66A-66A | CA\_2A-5A  CA\_5A-66A | 2 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 80 | 0 |
| 5 | See CA\_5B Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-5A-46D | CA\_2A-5A | 2 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 90 | 0 |
| 5 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_5A-46D-66A | CA\_5A\_46A  CA\_5A\_66A | 5 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  | 90 | 0 |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| CA\_2A-13A-66A-66B | CA\_2A-13A  CA\_13A-66A | 2 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 70 | 0 |
| 13 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| 66 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| 66 | See CA\_66B Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-48A-48C | CA\_2A-13A | 2 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 90 | 0 |
| 13 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| 48 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_13A-46D-66A | CA\_13A-66A | 13 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  | 90 | 0 |
| 46 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| CA\_2A-13A-46D | CA\_2A-13A | 2 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 90 | 0 |
| 13 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| 46 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_1A-3A-38A | CA\_1A-3A | 1 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 60 | 0 |
| 3 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| 38 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| 3 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| CA\_2A-12A-66A | CA\_2A-12A  CA\_2A-66A  CA\_12A-66A | 2 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 50 | 0 |
| 12 |  |  | | | | | Yes | | | | | Yes | | | |  | | |  |
| 66 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| CA\_1A-3A-42D | CA\_1A-3A,  CA\_1A-42A  CA\_3A-42A,  CA\_1A-42C  CA\_3A-42C | 1 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes | 100 | 0 |
| 3 |  |  | | | | | Yes | | | | | Yes | | | | Yes | | | Yes |
| 42 | See CA\_42D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-5A-66A | CA\_5A-66A,  CA\_2A-5A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 50 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_2A-13A-66A | CA\_2A-13A,  CA\_13A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 50 | 0 |
| 13 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_2A-48A-66A | CA\_48A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 60 | 0 |
| 48 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| 66 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_2A-2A-5A-66A | CA\_2A-5A,  CA\_5A-66A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 of [1] | | | | | | | | | | | | | | | | | | | 70 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_2A-5A-66A-66A | CA\_2A-5A,  CA\_5A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 70 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66A-66A Bandwidth combination set 0 in Table 5.6A.1-3 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-5A-66B | CA\_2A-5A,  CA\_5A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 70 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66B Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-5A-66C | CA\_2A-5A,  CA\_5A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 90 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66C Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-5B-66A | CA\_2A-5A,  CA\_5A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 60 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_2A-2A-13A-66A | CA\_2A-13A,  CA\_13A-66A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 of [1] | | | | | | | | | | | | | | | | | | | 70 | 0 |
| 13 |  | | | | |  | | | | | Yes | | |  | | |  | |  |
| 66 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | |  |
| CA\_2A-13A-66A-66A | CA\_2A-13A,  CA\_13A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 70 | 0 |
| 13 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66A-66A Bandwidth combination set 0 in Table 5.6A.1-3 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-66B | CA\_2A-13A,  CA\_13A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 90 | 0 |
| 13 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66B Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-66C | CA\_2A-13A,  CA\_13A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 90 | 0 |
| 13 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66C Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-2A-5A-66A-66A | CA\_2A-5A,  CA\_5A-66A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 of [1] | | | | | | | | | | | | | | | | | | | 90 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66A-66A Bandwidth combination set 0 in Table 5.6A.1-3 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-2A-5A-66B | CA\_2A-5A,  CA\_5A-66A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 of [1] | | | | | | | | | | | | | | | | | | | 90 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66B Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-2A-5A-66C | CA\_2A-5A,  CA\_5A-66A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 of [1] | | | | | | | | | | | | | | | | | | | 110 | 0 |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66C Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-5B-66B | CA\_2A-5A,  CA\_5A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 80 | 0 |
| 5 | See CA\_5B Bandwidth Combination Set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66B Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-5B-66C | CA\_2A-5A,  CA\_5A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 100 | 0 |
| 5 | See CA\_5B Bandwidth Combination Set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66C Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| CA\_2A-46D-48A | CA\_2A-48A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 100 | 0 |
| 46 | See the CA\_46D Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| 48 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_2A-46E-48A | CA\_2A-48A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 120 | 0 |
| 46 | See the CA\_46E Bandwidth combination set 0 in Table 5.6A.1-1 of [1] | | | | | | | | | | | | | | | | | | |
| 48 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_3A-8A-38A | CA\_3A-8A | 1 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 50 | 0 |
| 3 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 38 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_1A-1A-3C-5A | CA\_1A-3A,  CA\_1A-5A  CA\_3A-5A | 1 | See CA\_1A-1A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | | 90 | 0 |
| 3 | See CA\_3C Bandwidth combination set 0 in table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 5 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| CA\_1A-1A-3C-28A | CA\_1A-3A,  CA\_1A-28A  CA\_3A-28A | 1 | See CA\_1A-1A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | | 100 | 0 |
| 3 | See CA\_3C Bandwidth combination set 0 in table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 28 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_1A-3A-3A-7A | CA\_1A-3A, CA\_1A-7A, CA\_3A-7A | 1 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 80 | 0 |
| 3 | See the CA\_3A-3A Bandwidth combination set 0 in the Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| 7 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_1A-3A-3A-7A-7A | CA\_1A-3A, CA\_1A-7A, CA\_3A-7A | 1 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 100 | 0 |
| 3 | See the CA\_3A-3A Bandwidth combination set 0 in Table below | | | | | | | | | | | | | | | | | | |
| 7 | See the CA\_7A-7A Bandwidth combination set 1 in Table below | | | | | | | | | | | | | | | | | | |
| CA\_2A-14A-30A | CA\_2A-14A  CA\_14A-30A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 40 | 0 |
| 14 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 30 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| CA\_2A-14A-66A | CA\_2A-14A  CA\_14A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 50 | 0 |
| 14 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_14A-30A-66A | CA\_14A-30A  CA\_14A-66A | 14 | 14 | | | | |  | | | | |  | | | Yes | | | Yes | |  | 40 | 0 |
| 30 | 30 | | | | |  | | | | |  | | | Yes | | | Yes | |  |
| 66 | 66 | | | | |  | | | | |  | | | Yes | | | Yes | | Yes |
| CA\_2A-2A-14A-66A | CA\_2A-14A  CA\_14A-66A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | | 70 | 0 |
| 14 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes |
| CA\_14A-30A-66A-66A | CA\_14A-30A  CA\_14A-66A | 14 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  | 60 | 0 |
| 30 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66A-66A Bandwidth combination set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-14A-66A-66A | CA\_2A-14A  CA\_14A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 70 | 0 |
| 14 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66A-66A Bandwidth combination set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-2A-14A-66A-66A | CA\_2A-14A  CA\_14A-66A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | | 90 | 0 |
| 14 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-14A-66A-66A-66A | CA\_2A-14A  CA\_14A-66A | 2 |  | | | | |  | | | | | Yes | | | Yes | | | Yes | | Yes | 90 | 0 |
| 14 |  | | | | |  | | | | | Yes | | | Yes | | |  | |  |
| 66 | See CA\_66A-66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-4 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-46A-46D | CA\_2A-13A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | Yes | | | Yes | | 110 | 0 |
| 13 |  | | | |  | | | | | Yes | | | Yes | |  | | |  | |
| 46 | See CA\_46A-46D Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-46D | CA\_2A-13A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 90 | 0 |
| 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-46A-46C | CA\_2A-13A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 90 | 0 |
| 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 46 | See CA\_46A-46C Bandwidth Combination Set 0 in the Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-46C | CA\_2A-13A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 70 | 0 |
| 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-46A-46A | CA\_2A-13A | 2 | Yes | | | | Yes | | | | | Yes | | | 70 | | | 0 | | | Yes | 70 | 0 |
| 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 46 | See CA\_46A-46A Bandwidth combination set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-46A | CA\_2A-13A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 46 |  | | | |  | | | | |  | | | Yes | | |  | | | Yes |
| CA\_2A-13A-46E | CA\_2A-13A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 110 | 0 |
| 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 46 | See the CA\_46E Bandwidth combination set 0 in the Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-46E-66A | CA\_2A-66A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 120 | 0 |
| 46 | See the CA\_46E Bandwidth combination set 0 in the Table 5.6A.1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-46D-66A | CA\_2A-66A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 100 | 0 |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-46C-66A | CA\_2A-66A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 80 | 0 |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-46A-66A | CA\_2A-66A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 60 | 0 |
| 46 |  | | | |  | | | | |  | | | Yes | | |  | | | Yes |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-48A-66A | CA\_2A-48A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 60 | 0 |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_13A-48A-66A | CA\_13A-48A | 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  | 50 | 0 |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_13A-48A-66A | CA\_13A-66A | 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  | 50 | 0 |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_13A-48A-66A | CA\_48A-66A | 13 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  | 50 | 0 |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-46D-48C | CA\_2A-48A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 120 | 0 |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_46D-48C-66A | CA\_48A-66A | 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | | 120 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-46C-48C | CA\_2A-48A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 100 | 0 |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-46D-48A | CA\_2A-48A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 100 | 0 |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_46C-48C-66A | CA\_48A-66A | 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | | 100 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_46A-48C-66A | CA\_48A-66A | 46 |  | | | |  | | | | |  | | | Yes | | |  | | | Yes | 80 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_46D-48A-66A | CA\_48A-66A | 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | | 100 | 0 |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-48C-66A | CA\_2A-48A  CA\_48A-66A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 80 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-46A-48C | CA\_2A-48A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 80 | 0 |
| 46 |  | | | |  | | | | |  | | | Yes | | |  | | | Yes |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-46C-48A | CA\_2A-48A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 80 | 0 |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-46A-48A | CA\_2A-48A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 60 | 0 |
| 46 |  | | | |  | | | | |  | | | Yes | | |  | | | Yes |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_46C-48A-66A | CA\_48A-66A | 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | | 80 | 0 |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_46A-48A-66A | CA\_48A-66A | 46 |  | | | |  | | | | |  | | | Yes | | |  | | | Yes | 60 | 0 |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_1A-7A-20A | CA\_1A-7A,  CA\_1A-20A,  CA\_7A-20A | 1 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes | 60 | 0 |
| 7 |  | | | |  | | | | |  | | | Yes | | | Yes | | | Yes |
| 20 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_1A-3A-3A-8A | CA\_1A-3A, CA\_1A-8A,  CA\_3A-8A | 1 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes | 70 | 0 |
| 3 | See CA\_3A-3A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| 8 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| CA\_1A-7A-8A | CA\_7A-8A | 1 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 7 |  | | | |  | | | | |  | | | Yes | | | Yes | | | Yes |
| 8 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 1 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes | 50 | 1 |
| 7 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| 8 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| CA\_1A-7A-7A-8A | CA\_1A-7A, CA\_1A-8A,  CA\_7A-8A | 1 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes | 70 | 0 |
| 7 | See CA\_7A-7A Bandwidth combination set 1 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| 8 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| CA\_2A-5A-48A | CA\_2A-48A  CA\_5A-48A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 5 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 48 |  | | | |  | | | | | Yes | | | Yes | | | Yes | | | Yes |
| CA\_2A-5A-48C | CA\_2A-48A  CA\_5A-48A  CA\_2A-5A | 2 | Yes | | | | Yes | | | | | Yes | | | Yes | | | Yes | | | Yes | 70 | 0 |
| 5 |  | | | |  | | | | | Yes | | | Yes | | |  | | |  |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-5A-48D | CA\_2A-5A  CA\_5A-48A  CA\_2A-48A | 2 | Yes | | Yes | | | | | | | Yes | | | Yes | | | Yes | | | Yes | 90 | 0 |
| 5 |  | |  | | | | | | | Yes | | | Yes | | |  | | |  |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-48A-66A | CA\_2A-48A  CA\_2A-66A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 60 | 0 |
| 48 |  | |  | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_2A-48A-66A-66A | CA\_48A-66A  CA\_2A-48A  CA\_2A-66A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 80 | 0 |
| 48 |  | |  | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-48D-66A | CA\_48A-66A  CA\_2A-66A  CA\_2A-48A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 100 | 0 |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_2A-48C-66A-66A | CA\_48A-66A  CA\_2A-66A  CA\_2A-48A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 100 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-48D-66A-66A | CA\_48A-66A  CA\_2A-66A  CA\_2A-48A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 120 | 0 |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-48E-66A | CA\_48A-66A  CA\_2A-66A  CA\_2A-48A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 100 | 0 |
| 48 | See CA\_48E Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_2A-48E-66A-66A | CA\_48A-66A  CA\_2A-66A  CA\_2A-48A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 120 | 0 |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-66A | CA\_2A-66A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_2A-13A-66A-66A | CA\_13A-66A  CA\_2A-13A  CA\_2A-66A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 70 | 0 |
| 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-48A | CA\_2A-48A  CA\_13A-48A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  |
| 48 |  | |  | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_2A-13A-48C | CA\_2A-48A  CA\_13A-48A  CA\_2A-13A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 70 | 0 |
| 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_2A-13A-48D | CA\_2A-48A  CA\_13A-48A | 2 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 90 | 0 |
| 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| CA\_5A-48A-66A | CA\_48A-66A  CA\_5A-66A  CA\_5A-48A | 5 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 50 | 0 |
| 48 |  | |  | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_5A-48A-66A-66A | CA\_48A-66A  CA\_5A-66A  CA\_5A-48A | 5 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 70 | 0 |
| 48 |  | |  | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_5A-48C-66A | CA\_48A-66A  CA\_5A-66A  CA\_5A-48A | 5 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 70 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_5A-48C-66A-66A | CA\_48A-66A  CA\_5A-66A  CA\_5A-48A | 5 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 90 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_5A-48D-66A | CA\_48A-66A  CA\_5A-48A | 5 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 90 | 0 |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_5A-48D-66A-66A | CA\_48A-66A  CA\_5A-66A  CA\_5A-48A | 5 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 110 | 0 |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_13A-48A-66A | CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 50 | 0 |
| 48 |  | |  | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_13A-48A-66A-66A | CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 13 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes | 70 | 0 |
| 48 |  | |  | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_13A-48C-66A | CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 70 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_13A-48C-66A-66A | CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 120 | 0 |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_13A-48D-66A | CA\_48A-66A  CA\_13A-48A | 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 90 | 0 |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | | Yes | | | | | Yes | | | Yes | | | Yes |
| CA\_13A-48D-66A-66A | CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 13 |  | |  | | | | | Yes | | | | | Yes | | |  | | |  | 110 | 0 |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_2A-5A-66A-66A | CA\_2A-66A  CA\_5A-66A | 2 | Yes | | | Yes | | | | | Yes | | | | Yes | | | Yes | | | Yes | 80 | 0 |
| 5 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | | |
| CA\_1A-18A-41A | CA\_1A-18A  CA\_1A-41A  CA\_18A-41A | 1 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 55 | 0 |
| 18 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | |  |
| 41 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |
| CA\_1A-18A-41C | CA\_1A-18A  CA\_1A-41A  CA\_1A-41C  CA\_18A-41A  CA\_18A-41C | 1 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 75 | 0 |
| 18 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | |  |
| 41 | See CA\_41C Bandwidth combination set 0 in Table 5.6A.1-1 in TS36.101 | | | | | | | | | | | | | | | | | | |
| CA\_2A-12A-30A | CA\_2A-12A  CA\_2A-30A  CA\_12A-30A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 40 | 0 |
| 12 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| CA\_2A-12A-66A | CA\_2A-12A  CA\_2A- 66A  CA\_12A-66A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 12 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |
| CA\_2A-30A-66A | CA\_2A-30A  CA\_2A-66A  CA\_30A-66A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |
| CA\_12A-30A-66A | CA\_12A-30A  CA\_12A-66A  CA\_30A-66A | 12 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  | 40 | 0 |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |
| CA\_2A-29A-30A | CA\_2A-30A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 40 | 0 |
| 29 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| CA\_2A-29A-66A | CA\_2A-66A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 40 | 0 |
| 29 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| CA\_29A-30A-66A | CA\_30A-66A | 29 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  | 40 | 0 |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |
| CA\_2A-12A-66A-66A | CA\_2A-12A  CA\_2A-66A  CA\_12A-66A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 12 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |
| CA\_12A-30A-66A-66A | CA\_12A-30A  CA\_12A-66A  CA\_30A-66A | 12 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  | 40 | 0 |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |
| CA\_2A-2A-12A-30A | CA\_2A-12A  CA\_2A-30A  CA\_12A-30A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 40 | 0 |
| 12 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| CA\_2A-2A-12A-66A | CA\_2A-12A  CA\_2A-66A  CA\_12-66A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 12 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |
| CA\_2A-2A-5A-30A | CA\_2A-5A  CA\_2A-30A  CA\_5A-30A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 40 | 0 |
| 5 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 30 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 2A-2A-12A-66A-66A | CA\_2A-12A  CA\_2A-66A  CA\_12A-66A | 2 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes | 50 | 0 |
| 12 |  | | |  | | | | | Yes | | | | Yes | | |  | | |  |
| 66 |  | | |  | | | | | Yes | | | | Yes | | | Yes | | | Yes |

CA configurations for 4 bands DL with 2 bands UL

Table 2-1: Individual combination names, proponents and supporting companies for each CA band combinations

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Combi**  **nation** | **#**  **CC for DL** | **CA configurations**  **\*Unless otherwise stated, the number of UL CC is one.** | **REL-indep.**  **From** | **contact**  **name, company** | **contact**  **email** | **other supporting companies**  **(min. 3)** | **status**  **(new, ongoing, completed, stopped)** | **supported next level fallback modes (in DL and UL)** |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48C-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-13A-48C-66A\_1UL\_2A\_BCS0  CA\_5DL\_2A-13A-48C-66A\_1UL\_13A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48C-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-13A-48C-66A\_1UL\_13A\_BCS0  CA\_5DL\_2A-13A-48C-66A\_1UL\_66A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48A-48A-66A\_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-13A-48A-48A-66A\_1UL\_2A\_BCS0  CA\_5DL\_2A-13A-48A-48A-66A\_1UL\_13A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48A-48A-66A\_2BUL\_13A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@verizonwireless.com](mailto:zheng.zhao@verizonwireless.com) | Nokia, Qualcomm, Ericsson, Samsung | completed | CA\_5DL\_2A-13A-48A-48A-66A\_1UL\_13A\_BCS0  CA\_5DL\_2A-13A-48A-48A-66A\_1UL\_66A\_BCS0 |
| 1-3-8-38 | 4 | CA\_4BDL\_1A-3A-8A-38A\_2BUL\_ 1A-3A\_BCS0 | REL-11 | Zhangpeng,  Huawei | zhangpeng169@huawei.com | Deutsche Telekom, Hisilicon, T-mobile | completed | Completed: CA\_4DL\_1A-3A-8A-38A\_1UL\_BCS0  Completed: CA\_2DL\_1A-3A\_2UL 1A-3A\_BCS0 |
| 1-3-8-38 | 4 | CA\_4BDL\_1A-3A-8A-38A\_2BUL\_ 1A-8A\_BCS0 | REL-11 | Zhangpeng,  Huawei | zhangpeng169@huawei.com | Deutsche Telekom, Hisilicon, T-mobile | completed | Completed: CA\_4DL\_1A-3A-8A-38A\_1UL\_BCS0  Completed: CA\_2DL\_1A-8A\_2UL 1A-8A\_BCS0 |
| 1-3-8-38 | 4 | CA\_4BDL\_1A-3A-8A-38A\_2BUL\_ 3A-8A\_BCS0 | REL-11 | Zhangpeng,  Huawei | zhangpeng169@huawei.com | Deutsche Telekom, Hisilicon, T-mobile | completed | Completed: CA\_4DL\_1A-3A-8A-38A\_1UL\_BCS0  Completed: CA\_2DL\_3A-8A\_2UL 3A-8A\_BCS3 |
| 2-46-48-66 | 7 | CA\_4BDL\_2A-46E-48A-66A\_2BUL\_CA\_2A-48A | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | DL\_2A-46E-48A\_BCS0 – Completed  DL\_2A-46E-66A\_BCS0 – Completed  DL\_2A-46D-48A-66A\_BCS0 – Completed  DL\_46E-48A-66A\_BCS0 – Completed |
| 2-46-48-66 | 7 | CA\_4BDL\_2A-46E-48A-66A\_2BUL\_CA\_48A-66A | REL-11 | Zheng Zhao Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | DL\_2A-46E-48A\_BCS0 – Completed  DL\_2A-46E-66A\_BCS0 – Completed  DL\_2A-46D-48A-66A\_BCS0 – Completed  DL\_46E-48A-66A\_BCS0 – Completed |
| 1-3-41-42 | 6 | CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_1A-3A\_BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_6CC\_1A-3A-41C-42C\_UL\_1A\_BCS0-ongoing 4B\_6CC\_1A-3A-41C-42C\_UL\_3A\_BCS0- ongoing  4B\_5CC\_1A-3A-41C-42A\_UL\_1A-3A\_BCS0-new  4B\_5CC\_1A-3A-41A-42C\_UL\_1A-3A\_BCS0-new |
| 1-3-41-42 | 6 | CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_1A-42A\_BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_6CC\_1A-3A-41C-42C\_UL\_1A\_BCS0- ongoing 4B\_6CC\_1A-3A-41C-42C\_UL\_42A\_BCS0- ongoing  4B\_5CC\_1A-3A-41C-42A\_UL\_1A-42A\_BCS0-new  4B\_5CC\_1A-3A-41A-42C\_UL\_1A-42A\_BCS0-new  3B-5CC\_1A-41C-42C\_UL\_1A-42A\_BCS0-completed |
| 1-3-41-42 | 6 | CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_1A-42C\_BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_6CC\_1A-3A-41C-42C\_UL\_1A-42A\_BCS0-new 4B\_6CC\_1A-3A-41C-42C\_UL\_42C\_BCS0-new  4B\_5CC\_1A-3A-41A-42C\_UL\_1A-42C\_BCS0-new  3B-5CC\_1A-41C-42C\_UL\_1A-42C\_BCS0-completed |
| 1-3-41-42 | 6 | CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_3A-42A\_BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_6CC\_1A-3A-41C-42C\_UL\_3A\_BCS0- ongoing  4B\_6CC\_1A-3A-41C-42C\_UL\_42A\_BCS0- ongoing  3B\_5CC\_3A-41C-42C\_UL\_3A-42A\_BCS0-completed |
| 1-3-41-42 | 6 | CA\_4BDL\_1A-3A-41C-42C\_2BUL\_CA\_3A-42C\_BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Nokia, Nokia Shanghai Bell,, Sumitomo | completed | 4B\_6CC\_1A-3A-41C-42C\_UL\_3A-42A\_BCS0-new  4B\_6CC\_1A-3A-41C-42C\_UL\_42C\_BCS0-new  3B\_5CC\_3A-41C-42C\_UL\_3A-42C\_BCS0-completed |
| 1-3-41-42 | 5 | CA\_4BDL\_1A-3A-41C-42A\_2BUL\_CA\_1A-3A-BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_5CC-1A-3A-41C-42A\_UL\_1A\_BCS0- ongoing  4B\_5CC-1A-3A-41C-42A\_UL\_3A\_BCS0- ongoing  4B\_4CC-1A-3A-41A-42A\_UL\_1A-3A\_BCS0-new  3B-4CC-1A-3A-41C\_UL\_1A-3A\_BCS0-completed |
| 1-3-41-42 | 5 | CA\_4BDL\_1A-3A-41C-42A\_2BUL\_CA\_1A-42A-BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_5CC-1A-3A-41C-42A\_UL\_1A\_BCS0- ongoing  4B\_5CC-1A-3A-41C-42A\_UL\_42A\_BCS0- ongoing  4B\_4CC-1A-3A-41A-42A\_UL\_1A-42A\_BCS0-new  3B-4CC-1A-41C-42A\_UL\_1A-42A\_BCS0-completed |
| 1-3-41-42 | 5 | CA\_4BDL\_1A-3A-41C-42A\_2BUL\_CA\_3A-42A-BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_5CC-1A-3A-41C-42A\_UL\_3A\_BCS0- ongoing  4B\_5CC-1A-3A-41C-42A\_UL\_42A\_BCS0- ongoing  4B\_4CC-1A-3A-41A-42A\_UL\_3A-42A\_BCS0-new  3B-4CC-3A-41C-42A\_UL\_3A-42A\_BCS0-completed |
| 1-3-41-42 | 5 | CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA\_1A-3A-BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_5CC-1A-3A-41A-42C\_UL\_1A\_BCS0- ongoing  4B\_5CC-1A-3A-41A-42C\_UL\_3A\_BCS0- ongoing  4B\_4CC-1A-3A-41A-42A\_UL\_1A-3A\_BCS0-new  3B-4CC-1A-3A-42C\_UL\_UL\_1A-3A\_BCS0-completed |
| 1-3-41-42 | 5 | CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA\_1A-42A-BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_5CC-1A-3A-41A-42C\_UL\_1A\_BCS0- ongoing  4B\_5CC-1A-3A-41A-42C\_UL\_42A\_BCS0- ongoing  4B\_4CC-1A-3A-41A-42A\_UL\_1A-42A\_BCS0-new  3B-4CC-1A-41A-42C\_UL\_1A-42A\_BCS0-completed  3B-4CC-1A-3A-42C\_UL\_1A-42A\_BCS0-completed |
| 1-3-41-42 | 5 | CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA \_1A-42C-BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_5CC-1A-3A-41A-42C\_UL\_1A-42A\_BCS0- new  4B\_5CC-1A-3A-41A-42C\_UL\_42C\_BCS0-new  3B-4CC-1A-41A-42C\_UL\_1A-42C\_BCS0-completed  3B-4CC-1A-3A-42C\_UL\_1A-42C\_BCS0-completed |
| 1-3-41-42 | 5 | CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA \_3A-42A-BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_5CC-1A-3A-41A-42C\_UL\_3A\_BCS0- ongoing  4B\_5CC-1A-3A-41A-42C\_UL\_42A\_BCS0- ongoing  4B\_4CC-1A-3A-41A-42A\_UL\_3A-42A\_BCS0-new  3B-4CC-3A-41A-42C\_UL\_3A-42A\_BCS0-completed  3B-4CC-1A-3A-42C\_UL\_3A-42A\_BCS0-completed |
| 1-3-41-42 | 5 | CA\_4BDL\_1A-3A-41A-42C\_2BUL\_CA \_3A-42C-BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_5CC-1A-3A-41A-42C\_UL\_1A\_BCS0- ongoing  4B\_5CC-1A-3A-41A-42C\_UL\_42C\_BCS0-new  3B-4CC-3A-41A-42C\_UL\_3A-42C\_BCS0-completed  3B-4CC-3A-3A-42C\_UL\_3A-42C\_BCS0-completed |
| 1-3-41-42 | 4 | CA\_4BDL\_1A-3A-41A-42A\_2BUL\_CA \_1A-3A\_BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_4CC\_1A-3A-41A-42A\_UL\_1A\_BCS0- ongoing  4B\_4CC\_1A-3A-41A-42A\_UL\_3A\_BCS0- ongoing  3B-3CC\_1A-3A-42A\_UL\_1A-3A\_BCS0-completed  3B-3CC\_1A-3A-41A\_UL\_1A-3A\_BCS0-completed |
| 1-3-41-42 | 4 | CA\_4BDL\_1A-3A-41A-42A\_2BUL\_CA \_1A-42A\_BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_4CC\_1A-3A-41A-42A\_UL\_1A\_BCS0- ongoing  4B\_4CC\_1A-3A-41A-42A\_UL\_42A\_BCS0- ongoing  3B-3CC\_1A-41A-42A\_UL\_1A-42A\_BCS0-completed  3B-3CC\_1A-3A-42A\_UL\_1A-42A\_BCS0-completed |
| 1-3-41-42 | 4 | CA\_4BDL\_1A-3A-41A-42A\_2BUL\_CA \_3A-42A\_BCS0 | REL-12 | Xiao Shao, KDDI | [ko-shou@kddi.com](mailto:ko-shou@kddi.com) | Huawei, HiSilicon, Nokia, Nokia Shanghai Bell, Sumitomo | completed | 4B\_4CC\_1A-3A-41A-42A\_UL\_3A\_BCS0- ongoing  4B\_4CC\_1A-3A-41A-42A\_UL\_42A\_BCS0- ongoing  3B-3CC\_3A-41A-42A\_UL\_3A-42A\_BCS0-completed  3B-3CC\_1A-3A-42A\_UL\_3A-42A\_BCS0-completed |
| 2-14-30-66 | 4 | 4BDL\_2A-14A-30A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A-66A\_2BUL\_2A-14A\_BCS0 (new)  2A-14A-30A\_2BUL\_2A-14A\_BCS0 (new) |
| 2-14-30-66 | 4 | 4BDL\_2A-14A-30A--66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-30A--66A\_2BUL\_14A-66A\_BCS0 (new) |
| 2-2-14-30-66 | 5 | 4BDL\_2A-2A-14A-30A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-2A-14A-66A\_2BUL\_2A-14A\_BCS0 (new)  2A-2A-14A-30A\_2BUL\_2A-14A\_BCS0 (new) |
| 2-2-14-30-66 | 5 | 4BDL\_2A-2A-14A-30A-66A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A-30A-66A\_2BUL\_14A-30A\_BCS0 (new) |
| 2-2-14-30-66 | 5 | 4BDL\_2A-2A-14A-30A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-2A-14A-66A\_2BUL\_14A-66A\_BCS0 (new)  2A-14A-30A-66A\_2BUL\_14A-66A\_BCS0 (new) |
| 2-14-30-66-66 | 5 | 4BDL\_2A-14A-30A-66A-66A\_2BUL\_2A-14A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A-66A-66A\_2BUL\_2A-14A\_BCS0  2A-14A-30A-66A\_2BUL\_2A-14A\_BCS0 |
| 2-14-30-66-66 | 5 | 4BDL\_2A-14A-30A-66A-66A\_2BUL\_14A-30A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 2A-14A-30A-66A\_2BUL\_14A-30A\_BCS0 |
| 2-14-30-66-66 | 5 | 4BDL\_2A-14A-30A-66A-66A\_2BUL\_14A-66A\_BCS0 | REL-12 | Marc Grant  AT&T | [marc.grant@att.com](mailto:marc.grant@att.com) | Ericsson, Nokia, Qualcomm, Samsung | ongoing | 14A-30A-66A-66A\_2BUL\_14A-66A\_BCS0 |
| 2-13-46-66 | 7 | 4BDL\_2A-13A-46E-66A \_2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_2A-13A-46E\_UL\_2A-13A  NEW: DL\_2A-13A-46D-66A\_UL\_2A-13A  NEW: DL\_2A-46E-66A\_UL\_2A-66A  NEW: DL\_13A-46E-66A |
| 2-13-46-66 | 6 | 4BDL\_2A-13A-46D-66A 2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_2A-13A-46D-66A  COMPLETED: DL\_13A-46D-66A\_BCS0  COMPLETED: DL\_2A-46D-66A\_BCS0  NEW: DL\_2A-13A-46C-66A\_UL\_2A-13A  COMPLETED: DL\_2A-13A-46D\_UL\_2A-13A\_BCS0 |
| 2-13-46-66 | 5 | 4BDL\_2A-13A-46C-66A 2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | NEW: DL\_2A-13A-46C-66A\_BCS0  COMPLETED: DL\_13A-46C-66A\_BCS0  COMPLETED: DL\_2A-46C-66A\_BCS0  NEW: DL\_2A-13A-46A-66A\_UL\_2A-13A  COMPLETED: DL\_2A-13A-46C\_UL\_2A-13A\_BCS0 |
| 2-13-46-66 | 4 | 4BDL\_2A-13A-46A-66A 2BUL\_2A-13A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_13A-46A-66A\_BCS0  COMPLETED: DL\_2A-46A-66A\_BCS0  NEW: DL\_2A-13A-66A\_UL\_2A-13A  NEW: DL\_2A-13A-46A\_UL\_2A-13A |
| 2-46-48-66 | 7 | 4BDL\_2A-46D-48C-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46D-48C-66A\_BCS0  COMPLETED: DL\_46D-48C-66A\_BCS0  NEW: DL\_2A-46C-48C-66A\_UL\_2A-48A  NEW: DL\_2A-46D-48A-66A\_UL\_2A-48A  NEW: DL\_2A-46D-48C\_UL\_2A-48A |
| 2-46-48-66 | 7 | 4BDL\_2A-46D-48C-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46D-48C-66A\_BCS0  NEW: DL\_46D-48C-66A\_UL\_48A-66A  NEW: DL\_2A-46C-48C-66A\_UL\_48A-66A  NEW: DL\_2A-46D-48A-66A\_UL\_48A-66A  COMPLETED: DL\_2A-46D-48C\_BCS0 |
| 2-46-48-66 | 6 | 4BDL\_2A-46C-48C-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46C-48C-66A\_BCS0  COMPLETED: DL\_46C-48C-66A\_ BCS0  NEW: DL\_2A-46A-48C-66A\_UL\_2A-48A  NEW: DL\_2A-46C-48A-66A\_UL\_2A-48A  NEW: DL\_2A-46C-48C\_UL\_2A-48A |
| 2-46-48-66 | 6 | 4BDL\_2A-46D-48A-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46D-48A-66A\_ BCS0  COMPLETED: DL\_46D-48A-66A\_BCS0  NEW: DL\_2A-46A-48A-66A\_UL\_2A-48A  COMPLETD: DL\_2A-46D-66A\_BCS0  NEW: DL\_2A-46D-48A\_UL\_2A-48A |
| 2-46-48-66 | 6 | 4BDL\_2A-46C-48C-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46C-48C-66A\_BCS0  NEW: DL\_46C-48C-66A\_UL\_48A-66A  NEW: DL\_2A-46A-48C-66A\_UL\_48A-66A  NEW: DL\_2A-46C-48A-66A\_UL\_48A-66A  COMPLETED: DL\_2A-46C-48C\_BCS0 |
| 2-46-48-66 | 6 | 4BDL\_2A-46D-48A-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46D-48A-66A\_BCS0  NEW: DL\_46D-48A-66A\_UL\_48A-66A  NEW: DL\_2A-46C-48A-66A\_UL\_48A-66A  COMPLETED: DL\_2A-46D-66A\_ BCS0  COMPLETED: DL\_2A-46D-48A\_ BCS0 |
| 2-46-48-66 | 5 | 4BDL\_2A-46A-48C-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETD: DL\_2A-46A-48C-66A\_BCS0  COMPLETED: DL\_46A-48C-66A\_BCS0  NEW: DL\_2A-48C-66A\_UL\_2A-48A  NEW: DL\_2A-46A-48A-66A\_UL\_2A-48A  NEW: DL\_2A-46A-48C\_UL\_2A-48A |
| 2-46-48-66 | 5 | 4BDL\_2A-46C-48A-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46C-48A-66A\_BCS0  COMPLETED: DL\_46C-48A-66A\_BCS0  NEW: DL\_2A-46A-48A-66A\_UL\_2A-48A  COMPLETED: DL\_2A-46C-66A\_BCS0  NEW: DL\_2A-46C-48A-UL\_2A-48A |
| 2-46-48-66 | 4 | 4BDL\_2A-46A-48A-66A 2BUL\_2A-48A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46A-48A-66A\_BCS0  COMPLETED: DL\_46A-48A-66A\_BCS0  NEW: DL\_2A-48A-66A\_UL\_2A-48A  COMPLETED: DL\_2A-46A-66A\_BCS0  NEW: DL\_2A-46A-48A\_UL\_2A-48A |
| 2-46-48-66 | 5 | 4BDL\_2A-46A-48C-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46A-48C-66A\_BCS0  NEW: DL\_46A-48C-66A\_UL\_48A-66A  NEW: DL\_2A-48C-66A\_UL\_48A-66A  NEW: DL\_2A-46A-48A-66A\_UL\_48A-66A  COMPLETED: DL\_2A-46A-48C\_BCS0 |
| 2-46-48-66 | 5 | 4BDL\_2A-46C-48A-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46C-48A-66A\_BCS0  NEW: DL\_46C-48A-66A\_UL\_48A-66A  NEW: DL\_2A-46A-48A-66A\_UL\_48A-66A  COMPLETED: DL\_2A-46C-66A\_BCS0  COMPLETED: DL\_2A-46C-48A\_BCS0 |
| 2-46-48-66 | 4 | 4BDL\_2A-46A-48A-66A 2BUL\_48A-66A\_BCS0 | REL-11 | Zheng Zhao, Verizon | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | COMPLETED: DL\_2A-46A-48A-66A\_BCS0  NEW: DL\_46A-48A-66A\_UL\_48A-66A  NEW: DL\_2A-48A-66A\_UL\_48A-66A  COMPLETED: DL\_2A-46A-66A\_BCS0  COMPLETED: DL\_2A-46A-48A\_BCS0 |
| 1-3-7-20 | 4 | 4BDL\_1A-3A-7A-20A  2BUL\_1A-3A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-3A-7A-20A  (completed) DL\_1A-3A-7A  (completed) DL\_1A-3A-20A  (completed) DL\_1A-7A-20A  (completed) DL\_3A-7A-20A  (completed) DL\_1A-3A-7A\_UL\_1A-3A  (completed) DL\_1A-3A-20A\_UL\_1A-3A |
| 1-3-7-20 | 4 | 4BDL\_1A-3A-7A-20A  2BUL\_1A-7A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-3A-7A-20A  (completed) DL\_1A-3A-7A  (completed) DL\_1A-3A-20A  (completed) DL\_1A-7A-20A  (completed) DL\_3A-7A-20A  (completed) DL\_1A-3A-7A\_UL\_1A-7A  (new) DL\_1A-7A-20A\_UL\_1A-7A |
| 1-3-7-20 | 4 | 4BDL\_1A-3A-7A-20A  2BUL\_1A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-3A-7A-20A  (completed) DL\_1A-3A-7A  (completed) DL\_1A-3A-20A  (completed) DL\_1A-7A-20A  (completed) DL\_3A-7A-20A  (completed) DL\_1A-3A-20A\_UL\_1A-20A  (new) DL\_1A-7A-20A\_UL\_1A-20A |
| 1-3-7-20 | 4 | 4BDL\_1A-3A-7A-20A  2BUL\_3A-7A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-3A-7A-20A  (completed) DL\_1A-3A-7A  (completed) DL\_1A-3A-20A  (completed) DL\_1A-7A-20A  (completed) DL\_3A-7A-20A  (completed) DL\_1A-3A-7A\_UL\_3A-7A  (completed) DL\_3A-7A-20A\_UL\_3A-7A |
| 1-3-7-20 | 4 | 4BDL\_1A-3A-7A-20A  2BUL\_3A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-3A-7A-20A  (completed) DL\_1A-3A-7A  (completed) DL\_1A-3A-20A  (completed) DL\_1A-7A-20A  (completed) DL\_3A-7A-20A  (completed) DL\_1A-3A-20A\_UL\_3A-20A  (completed) DL\_3A-7A-20A\_UL\_3A-20A |
| 1-3-7-20 | 4 | 4BDL\_1A-3A-7A-20A  2BUL\_7A-20A\_BCS0 | REL-11 | Atoosa Hatefi, Orange | [atoosa.hatefi@orange.com](mailto:zheng.zhao@Verizonwireless.com) | Nokia, Telecom Italia, Ericsson, Huawei | completed | (completed) DL\_1A-3A-7A-20A  (completed) DL\_1A-3A-7A  (completed) DL\_1A-3A-20A  (completed) DL\_1A-7A-20A  (completed) DL\_3A-7A-20A  (completed) DL\_3A-7A-20A\_UL\_7A-20A  (new) DL\_1A-7A-20A\_UL\_7A-20A |
| 1-3-7-8 | 4 | 4BDL\_CA\_1A-3A-7A-8A 2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-8A\_UL\_1A-8A  (completed) DL\_1A-7A-8A\_UL\_1A-8A |
| 1-3-7-8 | 4 | 4BDL\_CA\_1A-3A-7A-8A 2BUL\_1A-8A\_BCS1 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-8A\_UL\_1A-8A  (completed) DL\_1A-7A-8A\_UL\_1A-8A |
| 1-3-7-8 | 4 | 4BDL\_CA\_1A-3A-7A-8A 2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (new) DL\_1A-7A-8A\_UL\_7A-8A  (completed) DL\_3A-7A-8A\_UL\_7A-8A |
| 1-3-7-8 | 4 | 4BDL\_CA\_1A-3A-7A-8A 2BUL\_7A-8A\_BCS1 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (new) DL\_1A-7A-8A\_UL\_7A-8A  (completed) DL\_3A-7A-8A\_UL\_7A-8A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (ongoing) DL\_1A-3A-3A-7A\_UL\_1A-3A  (new) DL\_1A-3A-3A-8A\_UL\_1A-3A  (completed) DL\_1A-3A-7A-8A\_UL\_1A-3A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (ongoing) DL\_1A-3A-3A-7A\_UL\_1A-7A  (completed) DL\_1A-3A-7A-8A\_UL\_1A-7A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (ongoing) DL\_1A-3A-3A-8A\_UL\_1A-8A  (new) DL\_1A-3A-7A-8A\_UL\_1A-8A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (ongoing) DL\_1A-3A-3A-7A\_UL\_3A-7A  (completed) DL\_1A-3A-7A-8A\_UL\_3A-7A  (completed) DL\_3A-3A-7A-8A\_UL\_3A-7A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_3A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (new) DL\_1A-3A-3A-8A\_UL\_3A-8A  (completed) DL\_1A-3A-7A-8A\_UL\_3A-8A  (completed) DL\_3A-3A-7A-8A\_UL\_3A-8A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-3A-7A-8A 2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-7A-8A\_UL\_7A-8A  (completed) DL\_3A-3A-7A-8A\_UL\_7A-8A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-7A-7A\_UL\_1A-3A  (completed) DL\_1A-3A-7A-8A\_UL\_1A-3A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-7A-7A\_UL\_1A-7A  (completed) DL\_1A-3A-7A-8A\_UL\_1A-7A  (new) DL\_1A-7A-7A-8A\_UL\_1A-7A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (new) DL\_1A-3A-7A-8A\_UL\_1A-8A  (new) DL\_1A-7A-7A-8A\_UL\_1A-8A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-7A-7A\_UL\_3A-7A  (completed) DL\_1A-3A-7A-8A\_UL\_3A-7A  (completed) DL\_3A-7A-7A-8A\_UL\_3A-7A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_3A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-7A-8A\_UL\_3A-8A  (completed) DL\_3A-7A-7A-8A\_UL\_3A-8A |
| 1-3-7-8 | 5 | 4BDL\_CA\_1A-3A-7A-7A-8A 2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (completed) DL\_1A-3A-7A-8A\_UL\_7A-8A  (new) DL\_1A-7A-7A-8A\_UL\_7A-8A  (completed) DL\_3A-7A-7A-8A\_UL\_7A-8A |
| 1-3-7-8 | 6 | 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_1A-3A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (ongoing) DL\_1A-3A-3A-7A-7A\_UL\_1A-3A  (new) DL\_1A-3A-3A-7A-8A\_UL\_1A-3A  (new) DL\_1A-3A-7A-7A-8A\_UL\_1A-3A |
| 1-3-7-8 | 6 | 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_1A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (ongoing) DL\_1A-3A-3A-7A-7A\_UL\_1A-7A  (new) DL\_1A-3A-3A-7A-8A\_UL\_1A-7A  (new) DL\_1A-3A-7A-7A-8A\_UL\_1A-7A |
| 1-3-7-8 | 6 | 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_1A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (new) DL\_1A-3A-3A-7A-8A\_UL\_1A-8A  (new) DL\_1A-3A-7A-7A-8A\_UL\_1A-8A |
| 1-3-7-8 | 6 | 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_3A-7A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (ongoing) DL\_1A-3A-3A-7A-7A\_UL\_3A-7A  (new) DL\_1A-3A-3A-7A-8A\_UL\_3A-7A  (new) DL\_1A-3A-7A-7A-8A\_UL\_3A-7A  (completed) DL\_3A-3A-7A-7A-8A\_UL\_3A-7A |
| 1-3-7-8 | 6 | 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_3A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (new) DL\_1A-3A-3A-7A-8A\_UL\_3A-8A  (new) DL\_1A-3A-7A-7A-8A\_UL\_3A-8A  (completed) DL\_3A-3A-7A-7A-8A\_UL\_3A-8A |
| 1-3-7-8 | 6 | 4BDL\_CA\_1A-3A-3A-7A-7A-8A 2BUL\_7A-8A\_BCS0 | REL-11 | Bo-Han Hsieh, CHTTL | pohanhsieh@cht.com.tw | Ericsson, Nokia, Mediatek, SGS Wireless | completed | (new) DL\_1A-3A-3A-7A-8A\_UL\_7A-8A  (new) DL\_1A-3A-7A-7A-8A\_UL\_7A-8A  (completed) DL\_3A-3A-7A-7A-8A\_UL\_7A-8A |
| 2-13-48-66 | 4 | 4BDL\_2A-13A-48A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A\_BCS0  New: 3BDL\_2A-48A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-13A-66A\_2BUL\_2A-66A\_BCS0 |
| 2-13-48-66 | 4 | 4BDL\_2A-13A-48A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A\_BCS0  New: 3BDL\_2A-48A-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-13A-48A\_2BUL\_2A-48A\_BCS0 |
| 2-13-48-66 | 4 | 4BDL\_2A-13A-48A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A\_BCS0  Completed: 3BDL\_2A-48A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-13-48-66 | 4 | 4BDL\_2A-13A-48A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_13A-66A\_BCS0  Completed: 3BDL\_2A-13A-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-48-66 | 4 | 4BDL\_2A-13A-48A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A\_BCS0  New: 3BDL\_13A-48A-66A\_2BUL\_13A-48A\_BCS0  New: 3BDL\_2A-13A-48A\_2BUL\_13A-48A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48C-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48C-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_2A-66A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48C-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48C-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-13A-48C\_2BUL\_2A-48A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48C-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 3BDL\_2A-13A-48C-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48C-66A\_2BUL\_48A-66A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48C-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48C-66A\_BCS0  New: 3BDL\_13A-48C-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48C-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48C-66A\_BCS0  New: 3BDL\_2A-13A-48C\_2BUL\_13A-48A\_CS0  New: 3BDL\_13A-48C-66A\_2BUL\_13A-48A\_CS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48A-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A-66A\_BCS0  New: 3BDL\_2A-13A-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48A-66A-66A\_2BUL\_2A-66A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48A-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A-66A\_BCS0  New: 3BDL\_2A-48A-66A-66A\_2BUL\_2A-48A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A-66A\_BCS0  New: 3BDL\_2A-48A-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48A-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48A-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A-66A\_BCS0  New: 3BDL\_2A-13A-66A-66A\_2BUL\_13A-66A\_BCS0  New: 3BDL\_13A-48A-66A-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-48-66 | 5 | 4BDL\_2A-13A-48A-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | Completed: 4BDL\_2A-13A-48A-66A-66A\_BCS0  New: 3BDL\_13A-48A-66A-66A\_2BUL\_13A-48A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48C-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48C-66A-66A\_BCS0  New: 4BDL\_2A-13A-48A-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48C-66A-66A\_2BUL\_2A-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_2A-66A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48C-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48C-66A-66A\_BCS0  New: 4BDL\_2A-13A-48A-66A-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-48C-66A-66A\_2BUL\_2A-48A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_2A-48A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48C-66A-66A\_BCS0  New: 4BDL\_2A-13A-48A-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48C-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48C-66A-66A\_BCS0  New: 4BDL\_2A-13A-48A-66A-66A\_2BUL\_13A-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_13A-66A\_BCS0  New: 3BDL\_13A-48C-66A-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48C-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48C-66A-66A\_BCS0  New: 4BDL\_2A-13A-48A-66A-66A\_2BUL\_13A-48A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_13A-48A\_BCS0  New: 3BDL\_13A-48C-66A-66A\_2BUL\_13A-48A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48D-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_2A-66A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48D-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-13A-48D\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_2A-48A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48D-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48D-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48D-66A\_2BUL\_48A-66A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48D-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-48-66 | 6 | 4BDL\_2A-13A-48D-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A\_2BUL\_13A-48A\_BCS0  New: 3BDL\_2A-13A-48D\_2BUL\_13A-48A\_BCS0  New: 3BDL\_13A-48D-66A\_2BUL\_13A-48A\_BCS0 |
| 2-13-48-66 | 7 | 4BDL\_2A-13A-48D-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A-66A\_BCS0  New: 4BDL\_2A-13A-48D-66A\_2BUL\_2A-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_2A-66A\_BCS0 |
| 2-13-48-66 | 7 | 4BDL\_2A-13A-48D-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A-66A\_BCS0  New: 4BDL\_2A-13A-48D-66A\_2BUL\_2A-48A\_BCS0  New: 4BDL\_2A-13A-48C-66A-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_2A-48A\_BCS0 |
| 2-13-48-66 | 7 | 4BDL\_2A-13A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A-66A\_BCS0  New: 4BDL\_2A-13A-48D-66A\_2BUL\_48A-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_13A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-13-48-66 | 7 | 4BDL\_2A-13A-48D-66A-66A\_2BUL\_13A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A-66A\_BCS0  New: 4BDL\_2A-13A-48D-66A\_2BUL\_13A-66A\_BCS0  New: 4BDL\_2A-13A-48C-66A-66A\_2BUL\_13A-66A\_BCS0  New: 3BDL\_13A-48D-66A-66A\_2BUL\_13A-66A\_BCS0 |
| 2-13-48-66 | 7 | 4BDL\_2A-13A-48D-66A-66A\_2BUL\_13A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-13A-48D-66A-66A\_BCS0  New: 4BDL\_2A-13A-48D-66A\_2BUL\_13A-48A\_BCS0  New: 4BDL\_2A-13A-48C-66A-66A\_2BUL\_13A-48A\_BCS0  New: 3BDL\_13A-48D-66A-66A\_2BUL\_13A-48A\_BCS0 |
| 2-5-48-66 | 4 | 4BDL\_2A-5A-48A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48A-66A\_BCS0  Completed: 3BDL\_2A-48A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_2A-66A\_BCS0 |
| 2-5-48-66 | 4 | 4BDL\_2A-5A-48A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48A-66A\_BCS0  Completed: 3BDL\_2A-48A-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_2A-48A\_BCS0 |
| 2-5-48-66 | 4 | 4BDL\_2A-5A-48A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48A-66A\_BCS0  Completed: 3BDL\_2A-48A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_5A-48A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-5-48-66 | 4 | 4BDL\_2A-5A-48A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48A-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_5A-66A\_BCS0  New: 3BDL\_5A-48A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-48-66 | 4 | 4BDL\_2A-5A-48A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48A-66A\_BCS0  New: 3BDL\_2A-5A-48A\_2BUL\_5A-48A\_BCS0  New: 3BDL\_5A-48A-66A\_2BUL\_5A-48A\_BCS0 |
| 2-5-48-66 | 4 | 4BDL\_2A-5A-48A-66A\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48A-66A\_BCS0  New: 3BDL\_2A-5A-66A\_2BUL\_2A-5A\_BCS0  New: 3BDL\_2A-5A-48A\_2BUL\_2A-5A\_BCS0 |
| 2-5-48-66 | 5 | 4BDL\_2A-5A-48C-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48C-66A\_BCS0  Completed: 4BDL\_2A-5A-48A-66A\_2BUL\_2A-66A\_BCS0  Completed: 3BDL\_2A-48C-66A\_2BUL\_2A-66A\_BCS0 |
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| 2-5-48-66 | 5 | 4BDL\_2A-5A-48C-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48C-66A\_BCS0  New: 4BDL\_2A-5A-48A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_5A-48C-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48C-66A\_2BUL\_48A-66A\_BCS0 |
| 2-5-48-66 | 5 | 4BDL\_2A-5A-48C-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48C-66A\_BCS0  New: 4BDL\_2A-5A-48A-66A\_2BUL\_5A-66A\_BCS0  New: 3BDL\_5A-48C-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-48-66 | 5 | 4BDL\_2A-5A-48C-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48C-66A\_BCS0  New: 4BDL\_2A-5A-48A-66A\_2BUL\_5A-48A\_BCS0  New: 3BDL\_2A-5A-48C\_2BUL\_5A-48A\_BCS0  New: 3BDL\_5A-48C-66A\_2BUL\_5A-48A\_BCS0 |
| 2-5-48-66 | 5 | 4BDL\_2A-5A-48C-66A\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48C-66A\_BCS0  New: 4BDL\_2A-5A-48A-66A\_2BUL\_2A-5A\_BCS0  New: 3BDL\_2A-5A-48C\_2BUL\_2A-5A\_BCS0 |
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| 2-5-48-66 | 5 | 4BDL\_2A-5A-48A-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48A-66A-66A\_BCS0  New: 4BDL\_2A-5A-48A-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-5A-66A-66A\_2BUL\_2A-48A\_BCS0 |
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| 2-5-48-66 | 5 | 4BDL\_2A-5A-48A-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48A-66A-66A\_BCS0  New: 4BDL\_2A-5A-48A-66A\_2BUL\_5A-66A\_BCS0  New: 3BDL\_2A-5A-66A-66A\_2BUL\_5A-66A\_BCS0  New: 3BDL\_5A-48A-66A-66A\_2BUL\_5A-66A\_BCS0 |
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| 2-5-48-66 | 6 | 4BDL\_2A-5A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48C-66A-66A\_BCS0  New: 4BDL\_2A-5A-48A-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48C-66A-66A\_2BUL\_48A-66A\_BCS0  New: 4BDL\_2A-5A-48C-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_5A-48C-66A-66A\_2BUL\_48A-66A\_BCS0 |
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| 2-5-48-66 | 6 | 4BDL\_2A-5A-48D-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48D-66A\_BCS0  New: 4BDL\_2A-5A-48C-66A\_2BUL\_2A-66A\_BCS0 |
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| 2-5-48-66 | 7 | 4BDL\_2A-5A-48D-66A-66A\_2BUL\_2A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48D-66A-66A\_BCS0  New: 4BDL\_2A-5A-48D-66A\_2BUL\_2A-66A\_BCS0  New: 4BDL\_2A-5A-48C-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_2A-66A\_BCS0  New: 3BDL\_5A-48D-66A-66A\_2BUL\_2A-66A\_BCS0 |
| 2-5-48-66 | 7 | 4BDL\_2A-5A-48D-66A-66A\_2BUL\_2A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48D-66A-66A\_BCS0  New: 4BDL\_2A-5A-48D-66A\_2BUL\_2A-48A\_BCS0  New: 4BDL\_2A-5A-48C-66A-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_2A-48A\_BCS0  New: 3BDL\_5A-48D-66A-66A\_2BUL\_2A-48A\_BCS0 |
| 2-5-48-66 | 7 | 4BDL\_2A-5A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48D-66A-66A\_BCS0  New: 4BDL\_2A-5A-48D-66A\_2BUL\_48A-66A\_BCS0  New: 4BDL\_2A-5A-48C-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_2A-48D-66A-66A\_2BUL\_48A-66A\_BCS0  New: 3BDL\_5A-48D-66A-66A\_2BUL\_48A-66A\_BCS0 |
| 2-5-48-66 | 7 | 4BDL\_2A-5A-48D-66A-66A\_2BUL\_5A-66A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48D-66A-66A\_BCS0  New: 4BDL\_2A-5A-48D-66A\_2BUL\_5A-66A\_BCS0  New: 4BDL\_2A-5A-48C-66A-66A\_2BUL\_5A-66A\_BCS0  New: 3BDL\_5A-48D-66A-66A\_2BUL\_5A-66A\_BCS0 |
| 2-5-48-66 | 7 | 4BDL\_2A-5A-48D-66A-66A\_2BUL\_5A-48A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48D-66A-66A\_BCS0  New: 4BDL\_2A-5A-48D-66A\_2BUL\_5A-48A\_BCS0  New: 4BDL\_2A-5A-48C-66A-66A\_2BUL\_5A-48A\_BCS0  New: 3BDL\_5A-48D-66A-66A\_2BUL\_5A-48A\_BCS0 |
| 2-5-48-66 | 7 | 4BDL\_2A-5A-48D-66A-66A\_2BUL\_2A-5A\_BCS0 | Rel-11 | Zheng Zhao | [zheng.zhao@Verizonwireless.com](mailto:zheng.zhao@Verizonwireless.com) | Qualcomm, Ericsson, Nokia, Samsung | completed | New: 4BDL\_2A-5A-48D-66A-66A\_BCS0  New: 4BDL\_2A-5A-48D-66A\_2BUL\_2A-5A\_BCS0  New: 4BDL\_2A-5A-48C-66A-66A\_2BUL\_2A-5A\_BCS0 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CA configuration** | **Uplink Configuration** | **BCS** | **contact**  **name company** | **contact**  **email** | **other supporting companies**  **(min. 3)** | **status**  **(new ongoing completed stopped)** | **supported next level fallback modes (in DL and UL)** |
| CA\_2A-12A-30A-66A | CA\_2A-12A  CA\_2A-30A  CA\_2A-66A  CA\_12A-30A  CA\_12A-66A  CA\_30A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-12A\_UL\_2A-12A  DL\_2A-30A\_UL\_2A-30A  DL\_2A-66A\_UL\_2A-66A  DL\_12A-30A\_UL\_12A-30A  DL\_12A-66A\_UL\_12A-66A  DL\_30A-66A\_UL\_30A-66A |
| CA\_2A-29A-30A-66A | CA\_2A-30A  CA\_2A-66A  CA\_30A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-30A\_UL\_2A-30A  DL\_2A-66A\_UL\_2A-66A  DL\_30A-66A\_UL\_30A-66A |
| CA\_2A-2A-12A-30A-66A | CA\_2A-12A  CA\_2A-30A  CA\_2A-66A  CA\_12A-30A  CA\_12A-66A  CA\_30A-66A | 0 | Marc Grant, AT&T | marc.grant@att.com | Ericsson  Qualcomm  Nokia | New | DL\_2A-12A\_UL\_2A-12A  DL\_2A-30A\_UL\_2A-30A  DL\_2A-66A\_UL\_2A-66A  DL\_12A-30A\_UL\_12A-30A  DL\_12A-66A\_UL\_12A-66A  DL\_30A-66A\_UL\_30A-66A |

Bandwidth combination set for CA configuration

Table 2-2 Bandwidth combinations for 4 bands DL/2 bands UL CA band combinations

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| E-UTRA CA configuration / Bandwidth combination set | | | | | | | | | | | | | | | | | | | | | | | | |
| E-UTRA CA Configuration | Uplink CA configurations (NOTE 4) | E-UTRA Bands | 1.4 MHz | | | | 3 MHz | | 5 MHz | | | 10 MHz | | 15 MHz | | | | 20 MHz | | | | Maximum aggregated bandwidth  [MHz] | | Bandwidth combination set |
| CA\_2A-13A-48C-66A | CA\_2A-13A  CA\_13A-66A | 2 |  | | | |  | | Yes | | | Yes | | Yes | | | | Yes | | | | 90 | | 0 |
| 13 |  | | | |  | | Yes | | | Yes | |  | | | |  | | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | | | |  | |  |
| 66 |  | | |  | | | Yes | | | Yes | | Yes | | | | Yes | | | |  |  | |
| CA\_2A-13A-48A-48A-66A | CA\_2A-13A  CA\_13A-66A | 2 |  | | |  | | | Yes | | | Yes | | Yes | | | | Yes | | | | 90 | 0 | |
| 13 |  | | |  | | | Yes | | | Yes | |  | | | |  | | | |
| 48 | See CA\_48A-48A Bandwidth combination set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |  | | |  | |
| 66 |  | | |  | | | Yes | | | Yes | | Yes | | | | | Yes | | |  |  | |
| CA\_1A-3A-8A-38A | CA\_1A-3A  CA\_1A-8A  CA\_3A-8A | 1 |  | | |  | | | Yes | | | Yes | | Yes | | | | | Yes | | | 70 | 0 | |
| 3 |  | | |  | | | Yes | | | Yes | | Yes | | | | | Yes | | |
| 8 |  | | |  | | | Yes | | | Yes | |  | | | | |  | | |
| 38 |  | | |  | | | Yes | | | Yes | | Yes | | | | | Yes | | |
| CA\_2A-46E-48A-66A | CA\_2A-48A  CA\_66A-48A | 2 |  | | |  | | | Yes | | | Yes | | Yes | | | | | Yes | | | 140 | 0 | |
| 46 | See CA\_46E Bandwidth combination set 0 in  Table 5.6A.1-1 of 36.101 | | | | | | | | | | | | | | | | | |  | |  | |
| 48 |  | | |  | | | Yes | | | Yes | | Yes | | | | Yes | | |  | |  | |
| 66 |  | | |  | | | Yes | | | Yes | | Yes | | | | Yes | | |
| CA\_1A-3A-41C-42C | CA\_1A-3A,  CA\_1A-42A,  CA\_1A-42C,  CA\_3A-42A,  CA\_3A-42C | 1 |  | | |  | | | Yes | | | Yes | | Yes | | | | Yes | | | 120 | | 0 | |
| 3 |  | | |  | | | Yes | | | Yes | | Yes | | | | Yes | | |
| 41 | See CA\_41C Bandwidth Combination Set 0 in Table 5.6A.1-1 of TS36.101 | | | | | | | | | | | | | | | | |  | | |  | |
| 42 | See CA\_42C Bandwidth combination set 1 in Table 5.6A.1-1 of TS36.101 | | | | | | | | | | | | | | | | |
| CA\_1A-3A-41C-42A | CA\_1A-3A,  CA\_1A-42A,  CA\_3A-42A | 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 100 | | | 0 | |
| 3 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 41 | See CA\_41C Bandwidth Combination Set 0 in Table 5.6A.1-1 of TS36.101 | | | | | | | | | | | | | | | | |
| 42 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_1A-3A-41A-42C | CA\_1A-3A,  CA\_1A-42A,  CA\_1A-42C,  CA\_3A-42A,  CA\_3A-42C | 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 100 | | | 0 | |
| 3 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 41 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 42 | See CA\_42C Bandwidth combination set 1 in Table 5.6A.1-1 of TS36.101 | | | | | | | | | | | | | | | | |
| CA\_1A-3A-41A-42A | CA\_1A-3A,  CA\_1A-42A,  CA\_3A-42A | 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 100 | | | 0 | |
| 3 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 41 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 42 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-14A-30A-66A | CA\_2A-14A  CA\_14A-66A | 2 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 60 | | | 0 | |
| 14 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 30 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 66 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-2A-14A-30A-66A | CA\_2A-14A  CA\_14A-66A  CA\_14A-30A | 2 | See CA\_2A-2A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | | 80 | | | 0 | |
| 14 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 30 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 66 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-14A-30A-66A-66A | CA\_2A-14A  CA\_14A-66A  CA\_14A-30A - | 2 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 80 | | | 0 | |
| 14 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 30 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| CA\_2A-13A-46E-66A | CA\_2A-13A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 130 | | | 0 | |
| 13 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 46 | See the CA\_46E Bandwidth combination set 0 in the Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-13A-46D-66A | CA\_2A-13A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 110 | | | 0 | |
| 13 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-13A-46C-66A | CA\_2A-13A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 90 | | | 0 | |
| 13 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-13A-46A-66A | CA\_2A-13A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 70 | | | 0 | |
| 13 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 46 |  | | |  | | |  | | Yes | | | |  | | Yes | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46D-48C-66A | CA\_2A-48A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 140 | | | 0 | |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46D-48C-66A | CA\_48A-66A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 140 | | | 0 | |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46C-48C-66A | CA\_2A-48A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 120 | | | 0 | |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46D-48A-66A | CA\_2A-48A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 120 | | | 0 | |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 48 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46C-48C-66A | CA\_48A-66A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 120 | | | 0 | |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46D-48A-66A | CA\_48A-66A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 120 | | | 0 | |
| 46 | See CA\_46D Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 48 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46A-48C-66A | CA\_2A-48A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 100 | | | 0 | |
| 46 |  | | |  | | |  | | Yes | | | |  | | Yes | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46C-48A-66A | CA\_2A-48A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 100 | | | 0 | |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 48 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46A-48A-66A | CA\_2A-48A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 80 | | | 0 | |
| 46 |  | | |  | | |  | | Yes | | | |  | | Yes | | |
| 48 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46A-48C-66A | CA\_48A-66A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 100 | | | 0 | |
| 46 |  | | |  | | |  | | Yes | | | |  | | Yes | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46C-48A-66A | CA\_48A-66A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 100 | | | 0 | |
| 46 | See CA\_46C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 48 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-46A-48A-66A | CA\_48A-66A | 2 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | | 80 | | | 0 | |
| 46 |  | | |  | | |  | | Yes | | | |  | | Yes | | |
| 48 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | Yes | | | Yes | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_1A-3A-7A-20A | CA\_1A-3A,  CA\_1A-7A,  CA\_1A-20A,  CA\_3A-7A,  CA\_3A-20A,  CA\_7A-20A | 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 80 | | | 0 | |
| 3 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 7 |  | | |  | | |  | | Yes | | | | Yes | | Yes | | |
| 20 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_1A-3A-7A-8A | CA\_1A-8A,  CA\_7A-8A | 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 70 | | | 0 | |
| 3 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 7 |  | | |  | | |  | | Yes | | | | Yes | | Yes | | |
| 8 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 70 | | | 1 | |
| 3 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 7 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 8 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| CA\_1A-3A-3A-7A-8A | CA\_1A-3A,  CA\_1A-7A, CA\_1A-8A,  CA\_3A-7A,  CA\_3A-8A, CA\_7A-8A | 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 90 | | | 0 | |
| 3 | See the CA\_3A-3A Bandwidth combination set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| 7 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 8 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| CA\_1A-3A-7A-7A-8A | CA\_1A-3A,  CA\_1A-7A, CA\_1A-8A,  CA\_3A-7A,  CA\_3A-8A, CA\_7A-8A | 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 90 | | | 0 | |
| 3 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | |
| 7 | See the CA\_7A-7A Bandwidth combination set 1 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| 8 |  | | |  | | | Yes | | Yes | | | |  | |  | | |
| CA\_1A-3A-3A-7A-7A-8A | CA\_1A-3A,  CA\_1A-7A, CA\_1A-8A,  CA\_3A-7A,  CA\_3A-8A, CA\_7A-8A | 1 |  | | |  | | | Yes | | Yes | | | | Yes | | Yes | | | 110 | | | 0 | |
| 3 | See the CA\_3A-3A Bandwidth combination set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| 7 | See the CA\_7A-7A Bandwidth combination set 1 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| 8 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| CA\_2A-5A-48A-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_5A-66A  CA\_5A-48A  CA\_2A-5A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 70 | | | 0 | |
| 5 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 |  | |  | | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-5A-48C-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_5A-66A  CA\_5A-48A  CA\_2A-5A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 90 | | | 0 | |
| 5 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 |  | |  | | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| CA\_2A-5A-48A-66A-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_5A-66A  CA\_5A-48A  CA\_2A-5A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 90 | | | 0 | |
| 5 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-5A-48C-66A-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_5A-66A  CA\_5A-48A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 110 | | | 0 | |
| 5 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| CA\_2A-5A-48D-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_5A-66A  CA\_5A-48A  CA\_2A-5A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 110 | | | 0 | |
| 5 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-5A-48D-66A-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_5A-66A  CA\_5A-48A  CA\_2A-5A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 130 | | | 0 | |
| 5 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| CA\_2A-13A-48C-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 90 | | | 0 | |
| 13 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-13A-48C-66A-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 110 | | | 0 | |
| 13 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 | See CA\_48C Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| CA\_2A-13A-48D-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 110 | | | 0 | |
| 13 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-13A-48D-66A-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 130 | | | 0 | |
| 13 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 | See CA\_48D Bandwidth combination set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | | | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| CA\_2A-13A-48A-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 70 | | | 0 | |
| 13 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 |  | |  | | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | |
| CA\_2A-13A-48A-66A-66A | CA\_2A-66A  CA\_2A-48A  CA\_48A-66A  CA\_13A-66A  CA\_13A-48A | 2 | Yes | | Yes | | | | Yes | | Yes | | | | Yes | | Yes | | | 90 | | | 0 | |
| 13 |  | |  | | | | Yes | | Yes | | | |  | |  | | |
| 48 |  | |  | | | | Yes | | Yes | | | | Yes | | Yes | | |
| 66 | See CA\_66A-66A Bandwidth Combination Set 0 in Table 5.6A.1-3 | | | | | | | | | | | | | | | | |
| CA\_2A-12A-30A-66A | CA\_2A-12A  CA\_2A-30A  CA\_2A-66A  CA\_12A-30A  CA\_12A-66A  CA\_30A-66A | 2 |  |  | | | | Yes | | Yes | | | Yes | | | Yes | | | | 60 | | | 0 | |
| 12 |  |  | | | | Yes | | Yes | | |  | | |  | | | |
| 30 |  |  | | | | Yes | | Yes | | |  | | |  | | | |
| 66 |  |  | | | | Yes | | Yes | | | Yes | | | Yes | | | |
| CA\_2A-29A-30A-66A | CA\_2A-30A  CA\_2A-66A  CA\_30A-66A | 2 |  |  | | | | Yes | | Yes | | | Yes | | | Yes | | | | 60 | | | 0 | |
| 30 |  |  | | | | Yes | | Yes | | |  | | |  | | | |
| 66 |  |  | | | | Yes | | Yes | | | Yes | | | Yes | | | |
| 29 |  |  | | | | Yes | | Yes | | |  | | |  | | | |
| CA\_2A-2A-12A-30A-66A | CA\_2A-12A  CA\_2A-30A  CA\_2A-66A  CA\_12A-30A  CA\_12A-66A  CA\_30A-66A | 2 |  |  | | | | Yes | | Yes | | | Yes | | | Yes | | | | 60 | | | 0 | |
| 12 |  |  | | | | Yes | | Yes | | |  | | |  | | | |
| 30 |  |  | | | | Yes | | Yes | | |  | | |  | | | |
| 66 |  |  | | | | Yes | | Yes | | | Yes | | | Yes | | | |

CA configurations for 5 bands DL with 2 bands UL

Table 3-1: Individual combination names, proponents and supporting companies for each CA band combinations

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Combi**  **nation** | **#**  **CC for DL** | **CA configurations**  **\*Unless otherwise stated, the number of UL CC is one.** | **REL-indep.**  **From** | **contact**  **name, company** | **contact**  **email** | **other supporting companies**  **(min. 3)** | **status**  **(new, ongoing, completed, stopped)** | **supported next level fallback modes (in DL and UL)** |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

Bandwidth combination set for CA configuration

Table 3-2 Bandwidth combinations for 5 bands DL/2 bands UL CA band combinations

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **E-UTRA CA configuration / Bandwidth combination set** | | | | | | | | | | |
|
| **E-UTRA CA Configuration** | **Uplink CA configurations** | **E-UTRA Bands** | **1.4** | **3** | **5** | **10** | **15** | **20** | **Maximum aggregated bandwidth** | **Bandwidth combination set** |
| **MHz** | **MHz** | **MHz** | **MHz** | **MHz** | **MHz** | **[MHz]** |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | |

### 4.2 Objective of Performance part WI

NOTE: Leave empty if the WI proposal does not contain a RAN performance part.

This Perf. Part WI has to standardize the Perf. Part requirements:

* Required changes to be added to release independence TS 36.307.

of all REL-16 CA combinations that fall into the category defined by the WI title. See overview table in 4.1 above.

### 4.3 RAN time budget request (not applicable to RAN5 WIs/SIs)

NOTE: For all new RAN related WIs/SIs which are not led by RAN WG5 the WI/SI rapporteur has to fill out the attached Excel table to request time budgets for corresponding RAN WG meetings.  
The Excel table has to be filled out for all affected RAN WGs and up to the target date of the WI/SI.  
One time unit (TU) corresponds to ~ 2 hours in the meeting.  
If no TU is needed leave the field empty otherwise enter a number >0 in the field.

For revisions of already approved WI/SI descriptions: Please remove the Excel table from the WID/SID's zip file. The time budgets are already recorded. If you want to modify them, then this has to be done via the status report and not via a revised WID/SID.

If this WID is covering Core and Performance part, then please fill out one line for each part in the attached Excel table.

**additional comments to the time budget request in the attached Excel table:**

## 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **New specifications** *{One line per specification. Create/delete lines as needed}* | | | | | |
| Type | Series | Title | For info  at TSG# | For approval at TSG# | Remarks |
| *Internal TR* | *"TR36.716-03-02"* | *LTE inter-band CA for x bands DL with 2 bands UL with x=3, 4, 5* | *TSG#86* | *TSG#88* | *Core part*  *Rapporteur:*  *Lim Suhwan,*  *LG Electronics Inc.,* [*suhwan.lim@lge.com*](mailto:suhwan.lim@lge.com) |

*{Note 1: Only TSs may contain normative provisions. Study Items shall create or impact only TRs.  
"Internal TR" is intended for 3GPP internal use only whereas "External TR" may be transposed by OPs.}*

NOTE: If this is a RAN WID including Core and Perf. part, then all new Core part specs have to be listed first and then all new Perf. part specs. Indicate "Core part" or "Perf. part" under Remarks for each spec.  
By default a new specs can only be new for one of both parts.

|  |  |  |  |
| --- | --- | --- | --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| 36.101 | *Add new CA band combinations and related RF core requirements* | *TSG#88* | Core part |
| 36.307 | *Release independent manner will be applied to all new CA band combinations according to each CA band combinations* | *TSG#88* | Perf. part |

NOTE: If this is a RAN WID including Core and Perf. part, then all new Core part specs have to be listed first and then all new Perf. part specs. Indicate "Core part" or "Perf. part" under Remarks for each spec.  
If an existing spec is affected by both (Core part and Perf. part), then it has to be listed twice with appropriate approval dates.

## 6 Work item Rapporteur(s)

*Lim* *Suhwan,*

**Company:** *LG Electronics Inc.*

**Email:** [*suhwan.lim@lge.com*](mailto:suhwan.lim@lge.com)

## 7 Work item leadership

*R4*

## 8 Aspects that involve other WGs

*None*

NOTE: For RAN WIDs: Section 8 applies only toWGs outside of TSG RAN because RAN WG aspects have to be covered in section 4.

## 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| NTT DOCOMO, INC. |
| LG Electronics |
| Huawei |
| Qualcomm |
| Nokia |
| Nokia Shanghai Bell |
| Ericsson |
|  |