|  |  |
| --- | --- |
| 3GPP TR38.787 V0.1.0 (2024-11) | |
| Technical Report | |
| 3rd Generation Partnership Project;  Technical Specification Group Radio Access Network;  User Equipment (UE) radio transmission and reception for  NR Sidelink supporting intra-band CA in ITS band  (Release 19) | |
|  | |
| *5G-logo_175px* | 3GPP-logo_web |
|  | |
| The present document has been developed within the 3rd Generation Partnership Project (3GPP TM) and may be further elaborated for the purposes of 3GPP. The present document has not been subject to any approval process by the 3GPPOrganizational Partners and shall not be implemented. This Specification is provided for future development work within 3GPPonly. The Organizational Partners accept no liability for any use of this Specification. Specifications and Reports for implementation of the 3GPP TM system should be obtained via the 3GPP Organizational Partners' Publications Offices. | |

|  |
| --- |
|  |
| ***3GPP***  Postal address  3GPP support office address  650 Route des Lucioles - Sophia Antipolis  Valbonne - FRANCE  Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16  Internet  http://www.3gpp.org |
| ***Copyright Notification***  No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.  © 2022, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).  All rights reserved.  UMTS™ is a Trade Mark of ETSI registered for the benefit of its members  3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners LTE™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners  GSM® and the GSM logo are registered and owned by the GSM Association |

Contents

Foreword 5

1 Scope 7

2 References 7

3 Definitions of terms, symbols and abbreviations 7

3.1 Definitions 7

3.2 Symbols 7

3.3 Abbreviations 7

4 Background 8

5 Operating bands and channel arrangement for SL evolution 9

5.1 Operating bands 9

5.1.1 Operating bands for single carrier operation in unlicensed band 9

5.1.2 Operating band combinations for inter-band con-current operation 9

5.2 Channel bandwidth 9

5.2.1 Channel bandwidth for single carrier operation in unlicensed band 9

5.2.2 Channel bandwidth for inter-band con-current operation 9

5.3 Channel arrangement 9

5.3.1 Channel raster 9

5.3.2 Synchronization raster 9

6 Transmitter characteristics SL evolution 10

6.1 Tx requirements SL single carrier operation in unlicensed band 10

6.1.1 Maximum output power 10

6.1.2 UE maximum output power reduction 10

6.1.3 UE additional maximum output power reduction 10

6.1.4 Configured transmitted power 10

6.1.5 Minimum output power 10

6.1.6 Transmit OFF power 10

6.1.7 ON/OFF time mask 10

6.1.8 Power control 10

6.1.9 Transmit signal quality 10

6.1.10 Spectrum emission mask 10

6.1.11 ACLR requirements 10

6.1.12 Spurious emissions 10

6.1.13 Spurious emission band UE co-existence 10

6.1.14 Transmit intermodulation 10

6.2 Tx requirements for inter-band con-current operation 11

6.2.1 Maximum output power for inter-band con-current operation 11

6.2.2 UE maximum output power reduction for inter-band con-current operation 11

6.2.3 UE additional maximum output power reduction for inter-band con-current operation 11

6.2.4 Configured transmitted power for inter-band con-current operation 11

6.2.5 Minimum output power for inter-band con-current operation 11

6.2.6 Transmit OFF power for inter-band con-current operation 11

6.2.7 ON/OFF time mask for inter-band con-current operation 11

6.2.8 Power control for inter-band con-current operation 11

6.2.9 Transmit signal quality for inter-band con-current operation 11

6.2.10 Spectrum emission mask for inter-band con-current operation 11

6.2.11 ACLR requirements for inter-band con-current operation 11

6.2.12 Spurious emissions for inter-band con-current operation 11

6.2.13 Spurious emission band UE co-existence for inter-band con-current operation 11

6.2.14 Transmit intermodulation for inter-band con-current operation 11

7 Receiver characteristics SL evolution 11

7.1 Rx requirements SL single carrier operation in unlicensed bands 11

7.1.1 Reference sensitivity power level 11

7.1.2 Maximum input level 11

7.1.3 Adjacent Channel Selectivity 11

7.1.4 Blocking characteristics 11

7.1.5 Spurious response 11

7.1.6 Intermodulation characteristics 11

7.2 Rx requirements for inter-band con-current operation 12

7.2.1 Reference sensitivity power level for inter-band con-current operation 12

7.2.2 Maximum input level for inter-band con-current operation 12

7.2.3 Adjacent Channel Selectivity for inter-band con-current operation 12

7.2.4 Blocking characteristics for inter-band con-current operation 12

7.2.5 Spurious response for inter-band con-current operation 12

7.2.6 Intermodulation characteristics for inter-band con-current operation 12

8 Co-channel coexistence between LTE Sidelink and NR Sidelink 12

Annex A: Change history 12

# Foreword

This Technical Report has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

In the present document, modal verbs have the following meanings:

**shall** indicates a mandatory requirement to do something

**shall not** indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

**should** indicates a recommendation to do something

**should not** indicates a recommendation not to do something

**may** indicates permission to do something

**need not** indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

**can** indicates that something is possible

**cannot** indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

**will** indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

**will not** indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

**might** indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

**might not** indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

**is** (or any other verb in the indicative mood) indicates a statement of fact

**is not** (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

# 1 Scope

The present document is a technical report on sidelink evolution services in Rel-19. The purpose is to specify radio solutions that are necessary to support sidelink power class 2/3 in non-contiguous and PC2 contiguous intra band SL CA in ITS spectrum.

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TR 30.007: "Guideline on WI/SI for new Operating Bands".

[3] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone".

[4] RP-240023, “LS on extending Sidelink Carrier Aggregation support in Rel-19,” 5GAA WG4

[5] RP-240840, “New WID on NR Sidelink: Intra-band Carrier Aggregation in ITS band,”

# 3 Definitions of terms, symbols and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

Definition format (Normal)

**<defined term>:** <definition>.

**example:** text used to clarify abstract rules by applying them literally.

## 3.2 Symbols

For the purposes of the present document, the following symbols apply:

Symbol format (EW)

<symbol> <Explanation>

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

ACLR Adjacent Channel Leakage Ratio

ACS Adjacent Channel Selectivity

AGC Automatic Gain Control

A-MPR Additional Maximum Power Reduction

BLER BLock Error Rate

BS Base Station

CBW Channel Bandwidth

CDF Cumulative Distribution Function

CP-OFDM Cyclic Prefix-OFDM

DMRS Demodulation Reference Signal

EIRP Equivalent Isotropically Radiated Power

EVM Error Vector Magnitude

FDD Frequency Division Duplex

FDM Frequency Division Multiplexing

FR1 Frequency Range 1

ITS Intelligent Transportation System

LTE Long Term Evolution

MPR Maximum Power Reduction

NF Noise Figure

NR New Radio

OLPC Open Loop Power Control

PC Power Control

PRB Physical Resource Block

ProSe Proximity-based Services

PSCCH Physical Sidelink Control CHannel

PSSCH Physical Sidelink Shared CHannel

REFSENS Reference Sensitivity

RF Radio Frequency

SCS Sub-Carrier Spacing

SINR Signal to Interference plus Noise Ratio

SL Sidelink

Sidelink at unlicensed band

SNR Signal-to-Noise Ratio

TDD Time Division Duplex

TDM Time Division Multiplexing

UE User Equipment

UL Uplink

V2V Vehicle to Vehicle

V2X Vehicle to Everything

# 4 Background

In Rel-18, RAN4 specified the following NR sidelink requirements:

(1) NR sidelink CA (n47) with intra-band contiguous CA and power class 3

(2) NR sidelink single carrier in unlicensed spectrum (n46/n96/n102) with power class 5 for 1 Tx and 5 NS values

(3) NR sidelink inter-band con-current operation with power class 3 at NR Uu licensed band + power class 5 at un-licensed band

For NR sidelink CA, automotive industry shows strong interest towards power class 2/3 in contiguous and non-contiguous intra band SL CA to account for the fragmented utilization of different channels of 10MHz and 20MHz in n47 and to achieve sufficient communication range [4].

The detailed objectives for NR sidelink supporting intra-band CA in ITS band are captured in [5].

## 4.1 SL CA UE RF architectures

In SL evolution WI in Rel-19, RAN4 consider the following UE RF architectures for intra-band contiguous/non-contiguous CA operation in ITS spectrum.

For the NR intra-band contiguous/non-contiguous SL CA UE, the candidate RF architectures in Table 4.1-1 be considered to evaluate MPR/A-MPR requirements.

Table 4.1-1 SL intra-band CA UE RF architectures for MPR/A-MPR evaluation

|  |  |  |
| --- | --- | --- |
| Arch | description | Remarks |
| #1-1 | 1x26dBm PA  + 1LO | Single–Tx |
| #1-2 | 2x23dBm PA  + 1LO | dual-Tx or txDiversity |
| #2-2 | 2x23dBm PA  + 2LO | dualPA-Architecture |

For the NR intra-band contiguous SL CA UE, the UE architecture #1-1 and #1-2 with 1LO is prioritized in the agreed WF (R4-2410587). For the NR intra-band non-contiguous SL CA UE, both 1LO and 2LO architectures are considered for MPR/A-MPR evaluation.

# 5 Operating bands and channel arrangement for Sidelink CA

## 5.1 Operating bands

### 5.1.1 Operating band for intra-band contiguous CA

NR SL PC2 CA operation is designed to operate in the operating bands in FR1 defined in Table 5.1.1-1.

Table 5.1.1-1: Intra-band contiguous CA operating bands for SL CA in FR1

|  |  |  |
| --- | --- | --- |
| NR SL CA Band | NR Band | Interface |
| SL\_n47 | n47 | PC5 |

### 5.1.2 Operating band for intra-band non-contiguous CA

NR SL intra-band non-contiguous CA operation is designed to operate in the operating bands in FR1 defined in Table 5.1.1-1.

Table 5.1.1-1: Intra-band non-contiguous CA operating bands for SL CA in FR1

|  |  |  |
| --- | --- | --- |
| NR SL CA Band | NR Band | Interface |
| SL\_n47 | n47 | PC5 |

## 5.2 Channel bandwidth

### 5.2.1 Channel bandwidth for intra-band contiguous CA

For NR SL PC2 CA operation, the SL CA channel bandwidths for each operating band is specified in Table 5.2.1-1.

Table 5.2.1-1: Intra-band contiguous CA operating bands for SL PC2 CA in FR1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sidelink CA configuration / Bandwidth combination set | | | | | | | |
| Sidelink CA configuration | Sidelink CA configuration for TX | Component carriers in order of increasing carrier frequency | | | | Maximum aggregated  bandwidth (MHz) | Bandwidth combination set |
| Channel bandwidths for carrier (MHz) | Channel bandwidths for carrier (MHz) | Channel bandwidths for carrier (MHz) | **Channel bandwidths for carrier (MHz)** |
| SL\_n47B | SL\_n47B | 10 | 10, 20,30 |  |  | 70 | 0 |
| [20] | [20],[30] |  |  |
| 30 | 30,40 |  |  |

### 5.2.2 Channel bandwidth for intra-band non-contiguous CA

For NR SL CA intra-band non-contiguous operation, the SL CA channel bandwidths for each operating band is specified in Table 5.2.2-1.

Table 5.2.2-1 channel bandwidth combinations for SL intra-band non-contiguous CA

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sidelink CA configuration / Bandwidth combination set | | | | | | | |
| Sidelink CA configuration | Sidelink CA configuration for TX | Component carriers in order of increasing carrier frequency | | | | Maximum aggregated  bandwidth [MHz] | Bandwidth combination set |
| Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] |
| SL\_n47(2A) | SL\_n47(2A) | 10 | 10, 20 |  |  | 30 | 0 |

# 6 Transmitter characteristics for NR Sidelink supporting intra-band CA in ITS band

## 6.1 Tx requirements for SL intra-band contiguous CA

### 6.1.1 Maximum output power

### 6.1.2 UE maximum output power reduction

#### 6.1.2.1 MPR for simultaneous PSSCH/PSCCH transmission

For SL intra-band contiguous CA of PSCCH and PSSCH simultaneous transmission with contiguous RB allocation, specify MPR in Table 6.1.2.1-1 and Table 6.1.2.1-2 for 1x26dBm + 1LO and 2x23dBm + 1LO, respectively.

Table 6.1.2.1-1: MPR for power class 2 SL CA with contiguous RB allocation for 1x26dBm+1LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | Inner | Outer |
| CP-OFDM | QPSK | ≤ 2.5 | ≤ 5.5 |
|  | 16QAM | ≤ 3.0 | ≤ 5.5 |
|  | 64QAM | ≤ 4.0 | ≤ 5.5 |
|  | 256QAM | ≤ 7.0 | ≤ 7.0 |

Table 6.1.2.1-2: MPR for power class 2 SL CA with contiguous RB allocation for 2x23dBm+1LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | Inner | Outer |
| CP-OFDM | QPSK | ≤ 3.5 | ≤ 7.0 |
|  | 16QAM | ≤ 3.5 | ≤ 7.0 |
|  | 64QAM | ≤ 4.5 | ≤ 7.0 |
|  | 256QAM | ≤ 7.5 | ≤ 8.0 |

The contiguous allocation rule for SL intra-band contiguous CA refers to that for NR intra-band contiguous CA in 6.2A.2.1 in TS38.101-1.

For SL intra-band contiguous CA of PSCCH and PSSCH simultaneous transmission with non-contiguous RB allocation, specify MPR in Table 6.1.2.1-3 and Table 6.1.2.1-4 for 1x26dBm + 1LO and 2x23dBm + 1LO, respectively.

Table 6.1.2.1-3: MPR for power class 2 SL CA with non-contiguous RB allocation for 1x26dBm+1LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | Inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | ≤ 3.5 | ≤ 7.0 | ≤ 10.0 |
|  | 16QAM | ≤ 4.0 | ≤ 7.0 | ≤ 10.0 |
|  | 64QAM | ≤ 5.5 | ≤ 7.0 | ≤ 10.0 |
|  | 256QAM | ≤ 8.0 | ≤ 8.0 | ≤ 10.0 |

Table 6.1.2.1-4: MPR for power class 2 SL CA with non-contiguous RB allocation for 2x23dBm+1LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | Inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | ≤ 4.5 | ≤ 8.5 | ≤ 11.5 |
|  | 16QAM | ≤ 4.5 | ≤ 8.5 | ≤ 11.5 |
|  | 64QAM | ≤ 7.0 | ≤ 8.5 | ≤ 11.5 |
|  | 256QAM | ≤ 9.5 | ≤ 9.5 | ≤ 11.5 |

The non-contiguous allocation rule for SL intra-band contiguous CA refers to that for NR intra-band contiguous CA in 6.2A.2.1 in TS38.101-1.

##### 6.1.2.1.1 Simulation results from LG Electronics (R4-2415894)

<UE RF architecture>

Architecture #1-1, #1-2, and #2-1 in Table 6.1.2.1.1-1 are considered for MPR evaluation.

Table 6.1.2.1.1-1. UE Architecture for PC2 SL contiguous CA

|  |  |  |
| --- | --- | --- |
| Arch | description | Remarks |
| #1-1 | 1x26dBm PA+ 1LO | Single–Tx |
| #1-2 | 2x23dBm PA+ 1LO | dual-Tx or txDiversity |
| #2-2 | 2x23dBm PA+ 2LO | dualPA-Architecture |

< Simulation assumption >

The simulation assumption in Table 6.1.2.1.1-2 is considered.

Table 6.1.2.1.1-2. Simulation assumption

|  |  |
| --- | --- |
| Center frequency | 5.9GHz |
| Bandwidth | per CC: 10/20/30/40MHz  aggregated CBW: 10+10, 10+30, 20+20, 20+30, 20+40, 30+30 (MHz) |
| Maximum output power for aggregated CBW | 26dBm |
| Modulation per CC | QPSK/16QAM/64QAM/256QAM |
| Waveform | CP-OFDM |
| ACLR | 31dBc |
| Carrier leakage | 25dBc |
| IQ image | 34dBc |
| CIM3 | 60dBc |
| PA calibration | PA calibrated to deliver 30dBc ACLR for a fully allocated RBs in 20MHz QPSK DFT- S-OFDM waveform at 1 dB MPR.  This is based to share PA between LTE V2X and NR V2X at 5.9GHz as worst case. |

< Evaluation scenario >

The PSSCH MPR evaluation scenarios in Table 6.1.2.1.1-3 and Table 6.1.2.1.1-4 are considered for contiguous RB allocation and non-contiguous RB allocation.

Table 6.1.2.1.1-3: SL contiguous CA MPR evaluation scenarios for PSSCH with contiguous RB allocation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Aggregated CBW | Scenario | CC1 | CC2 | Inner/Outer RB allocation | SCS |
| 10MHz + 10MHz | 1 | 10RB42 | 10RB0 | Inner | 15 |
| 2 | 10RB42 | 12RB0 | Inner | 15 |
| 3 | 10RB42 | 15RB0 | Inner | 15 |
| 4 | 10RB42 | 25RB0 | Inner | 15 |
| 5 | 10RB42 | 30RB0 | Inner | 15 |
| 6 | 10RB42 | 36RB0 | Outer | 15 |
| 7 | 10RB42 | 50RB0 | Outer | 15 |
| 8 | 12RB40 | 36RB0 | Outer | 15 |
| 9 | 25RB27 | 36RB0 | Outer | 15 |
| 10 | 40RB12 | 40RB0 | Outer | 15 |
| 11 | 50RB2 | 50RB0 | Outer | 15 |
| 20MHz + 30MHz | 12 | 10RB41 | 10RB0 | Inner | 30 |
| 13 | 10RB41 | 12RB0 | Inner | 30 |
| 14 | 10RB41 | 25RB0 | Inner | 30 |
| 15 | 10RB41 | 30RB0 | Inner | 30 |
| 16 | 10RB41 | 48RB0 | Inner | 30 |
| 17 | 10RB41 | 50RB0 | Outer | 30 |
| 18 | 25RB26 | 36RB0 | Outer | 30 |
| 19 | 36RB15 | 36RB0 | Outer | 30 |
| 20 | 40RB11 | 40RB0 | Outer | 30 |
| 21 | 50RB1 | 75RB0 | Outer | 30 |
| 20MHz + 40MHz | 22 | 10RB41 | 10RB0 | Inner | 30 |
| 23 | 10RB41 | 25RB0 | Inner | 30 |
| 24 | 10RB41 | 36RB0 | Inner | 30 |
| 25 | 10RB41 | 48RB0 | Inner | 30 |
| 26 | 10RB41 | 60RB0 | Inner | 30 |
| 27 | 10RB41 | 70RB0 | Outer | 30 |
| 28 | 25RB26 | 36RB0 | Outer | 30 |
| 29 | 36RB15 | 70RB0 | Outer | 30 |
| 30 | 40RB11 | 90RB0 | Outer | 30 |
| 31 | 50RB1 | 105RB0 | Outer | 30 |
| 30MHz + 40MHz | 32 | 10RB68 | 10RB0 | Inner | 30 |
| 33 | 10RB68 | 25RB0 | Inner | 30 |
| 34 | 10RB68 | 36RB0 | Inner | 30 |
| 35 | 10RB68 | 48RB0 | Inner | 30 |
| 36 | 10RB68 | 60RB0 | Inner | 30 |
| 37 | 10RB68 | 70RB0 | Outer | 30 |
| 38 | 10RB68 | 105RB0 | Outer | 30 |
| 39 | 25RB53 | 70RB0 | Outer | 30 |
| 40 | 36RB42 | 90RB0 | Outer | 30 |
| 41 | 40RB38 | 90RB0 | Outer | 30 |
| 42 | 75RB3 | 105RB0 | Outer | 30 |
| 20MHz + 20MHz | 43 | 10RB41 | 10RB0 | Inner | 30 |
| 44 | 10RB41 | 12RB0 | Inner | 30 |
| 45 | 10RB41 | 15RB0 | Inner | 30 |
| 45 | 10RB41 | 25RB0 | Inner | 30 |
| 46 | 10RB41 | 30RB0 | Inner | 30 |
| 47 | 10RB41 | 36RB0 | Outer | 30 |
| 48 | 10RB41 | 50RB0 | Outer | 30 |
| 49 | 12RB39 | 36RB0 | Outer | 30 |
| 50 | 25RB26 | 36RB0 | Outer | 30 |
| 51 | 40RB11 | 40RB0 | Outer | 30 |
| 52 | 50RB1 | 50RB0 | Outer | 30 |
| 10MHz + 30MHz | 53 | 10RB41 | 10RB0 | Inner | 30 |
| 54 | 10RB41 | 12RB0 | Inner | 30 |
| 55 | 10RB41 | 15RB0 | Inner | 30 |
| 56 | 10RB41 | 20RB0 | Inner | 30 |
| 57 | 10RB41 | 25RB0 | Outer | 30 |
| 58 | 10RB41 | 50RB0 | Outer | 30 |
| 59 | 10RB41 | 75RB0 | Outer | 30 |
| 60 | 12RB12 | 36RB0 | Outer | 30 |
| 61 | 15RB9 | 60RB0 | Outer | 30 |
| 62 | 20RB4 | 75RB0 | Outer |  |
| 63 | 24RB0 | 75RB0 | Outer | 30 |

Table 6.1.2.1.1-4: SL contiguous CA MPR evaluation scenarios for PSSCH with non-contiguous RB allocation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Aggregated CBW | Scenario | CC1 | CC2 | Inner/Outer1/Outer2 RB allocation | SCS |
| 10MHz + 10MHz | 1 | 10RB0 | 10RB42 | Outer2 | 15 |
| 2 | 10RB18 | 10RB22 | Outer2 | 15 |
| 3 | 10RB19 | 10RB22 | Outer2 | 15 |
| 4 | 10RB27 | 10RB14 | Outer2 | 15 |
| 5 | 10RB33 | 10RB7 | Outer1 | 15 |
| 6 | 10RB34 | 10RB7 | Outer1 | 15 |
| 7 | 10RB42 | 10RB1 | Inner | 15 |
| 8 | 25RB0 | 25RB27 | Outer2 | 15 |
| 9 | 25RB19 | 25RB8 | Outer2 | 15 |
| 10 | 25RB20 | 25RB8 | Outer2 | 15 |
| 11 | 25RB27 | 25RB1 | Outer1 | 15 |
| 12 | 30RB0 | 30RB22 | Outer2 | 15 |
| 13 | 30RB19 | 30RB3 | Outer2 | 15 |
| 14 | 30RB19 | 30RB2 | Outer2 | 15 |
| 15 | 30RB22 | 30RB1 | Outer1 | 15 |
| 16 | 50RB1 | 50RB0 | Outer2 | 15 |
| 20MHz + 30MHz | 17 | 10RB0 | 10RB68 | Outer2 | 30 |
| 18 | 10RB15 | 10RB32 | Outer2 | 30 |
| 19 | 10RB15 | 10RB31 | Outer2 | 30 |
| 20 | 10RB32 | 10RB10 | Outer1 | 30 |
| 21 | 10RB34 | 10RB9 | Outer1 | 30 |
| 22 | 10RB34 | 10RB8 | Outer1 | 30 |
| 23 | 10RB41 | 10RB1 | Inner | 30 |
| 24 | 25RB0 | 25RB53 | Outer2 | 30 |
| 25 | 25RB20 | 25RB25 | Outer2 | 30 |
| 26 | 25RB21 | 25RB25 | Outer2 | 30 |
| 27 | 25RB26 | 25RB1 | Outer1 | 30 |
| 28 | 30RB0 | 30RB48 | Outer2 | 30 |
| 29 | 30RB15 | 30RB12 | Outer2 | 30 |
| 30 | 30RB15 | 30RB11 | Outer2 | 30 |
| 31 | 30RB21 | 30RB1 | Outer1 | 30 |
| 32 | 50RB0 | 50RB28 | Outer2 | 30 |
| 33 | 50RB0 | 50RB0 | Outer2 | 30 |
| 34 | 50RB0 | 78RB0 | Outer2 | 30 |
| 20MHz + 40MHz | 35 | 10RB0 | 10RB96 | Outer2 | 30 |
| 36 | 10RB4 | 10RB30 | Outer2 | 30 |
| 37 | 10RB5 | 10RB30 | Outer2 | 30 |
| 38 | 10RB37 | 10RB15 | Outer1 | 30 |
| 39 | 10RB38 | 10RB15 | Inner | 30 |
| 40 | 10RB41 | 10RB1 | Inner | 30 |
| 41 | 25RB0 | 25RB81 | Outer2 | 30 |
| 42 | 25RB20 | 25RB38 | Outer2 | 30 |
| 43 | 25RB20 | 25RB37 | Outer2 | 30 |
| 44 | 25RB26 | 25RB1 | Outer1 | 30 |
| 45 | 30RB0 | 30RB76 | Outer2 | 30 |
| 46 | 30RB15 | 30RB26 | Outer2 | 30 |
| 47 | 30RB15 | 30RB25 | Outer2 | 30 |
| 48 | 30RB21 | 30RB1 | Outer1 | 30 |
| 49 | 50RB0 | 50RB56 | Outer2 | 30 |
| 50 | 50RB0 | 50RB0 | Outer2 | 30 |
| 51 | 50RB0 | 105RB0 | Outer2 | 30 |
| 30MHz + 40MHz | 52 | 10RB0 | 10RB96 | Outer2 | 30 |
| 53 | 10RB13 | 10RB30 | Outer2 | 30 |
| 54 | 10RB14 | 10RB30 | Outer1 | 30 |
| 55 | 10RB50 | 10RB15 | Outer1 | 30 |
| 56 | 10RB51 | 10RB15 | Inner | 30 |
| 57 | 10RB68 | 10RB1 | Inner | 30 |
| 58 | 25RB0 | 25RB81 | Outer2 | 30 |
| 59 | 25RB28 | 25RB37 | Outer2 | 30 |
| 60 | 25RB28 | 25RB36 | Outer1 | 30 |
| 61 | 25RB51 | 25RB1 | Outer1 | 30 |
| 62 | 25RB52 | 25RB1 | Inner | 30 |
| 63 | 30RB0 | 30RB76 | Outer2 | 30 |
| 64 | 30RB24 | 30RB26 | Outer2 | 30 |
| 65 | 30RB24 | 30RB25 | Outer1 | 30 |
| 66 | 30RB48 | 30RB1 | Outer1 | 30 |
| 67 | 75RB0 | 50RB56 | Outer2 | 30 |
| 68 | 75RB0 | 50RB0 | Outer2 | 30 |
| 69 | 75RB0 | 105RB0 | Outer2 | 30 |
| 20MHz + 20MHz | 70 | 10RB0 | 10RB41 | Outer2 | 30 |
| 71 | 10RB17 | 10RB22 | Outer2 | 30 |
| 72 | 10RB18 | 10RB22 | Outer1 | 30 |
| 73 | 10RB27 | 10RB14 | Outer1 | 30 |
| 74 | 10RB33 | 10RB7 | Outer1 | 30 |
| 75 | 10RB34 | 10RB7 | Inner | 30 |
| 76 | 10RB41 | 10RB1 | Inner | 30 |
| 77 | 25RB0 | 25RB26 | Outer2 | 30 |
| 78 | 25RB18 | 25RB8 | Outer2 | 30 |
| 79 | 25RB19 | 25RB8 | Outer1 | 30 |
| 80 | 25RB26 | 25RB1 | Outer1 | 30 |
| 81 | 30RB0 | 30RB21 | Outer2 | 30 |
| 82 | 30RB18 | 30RB3 | Outer1 | 30 |
| 83 | 30RB18 | 30RB2 | Outer1 | 30 |
| 84 | 30RB21 | 30RB1 | Outer2 | 30 |
| 85 | 50RB0 | 50RB0 | Outer2 | 30 |
| 10MHz + 30MHz | 86 | 10RB0 | 10RB68 | Outer2 | 30 |
| 87 | 10RB6 | 10RB32 | Outer2 | 30 |
| 88 | 10RB6 | 10RB31 | Outer1 | 30 |
| 89 | 10RB14 | 10RB10 | Outer1 | 30 |
| 90 | 10RB14 | 10RB1 | Outer1 | 30 |
| 91 | 10RB0 | 12RB53 | Outer2 | 30 |
| 92 | 10RB3 | 12RB25 | Outer2 | 30 |
| 93 | 25RB4 | 12RB25 | Outer1 | 30 |
| 94 | 25RB12 | 12RB1 | Outer1 | 30 |
| 95 | 25RB0 | 30RB48 | Outer2 | 30 |
| 96 | 25RB3 | 30RB7 | Outer2 | 30 |
| 97 | 30RB3 | 30RB6 | Outer1 | 30 |
| 98 | 30RB12 | 30RB1 | Outer1 | 30 |
| 99 | 30RB0 | 50RB28 | Outer2 | 30 |
| 100 | 30RB0 | 50RB1 | Outer2 | 30 |
| 101 | 50RB0 | 75RB1 | Outer2 | 30 |

< Simulation results for contiguous RB allocations >

Table 6.1.2.1.1-5, Table 6.1.2.1.1-6, and Table 6.1.2.1.1-7 show the MPR simulation results for the SL contiguous CA scenarios of contiguous RB allocations with architecture #1-1, #1-2, and #2-1 in Table 6.1.2.1.1-1 respectively.

Table 6.1.2.1.1-5: PSSCH/PSCCH MPR simulation results for contiguous RB allocations with 1x26dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |  |  |  |  |  |  |  |
| 'QPSK' | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 1.7 | 3.1 | 2.1 | 2.1 | 2.4 | 3.1 |  |  |  |  |  |  |  |
| '16QAM' | 0.9 | 0.6 | 0.6 | 0.6 | 0.6 | 2.1 | 3.1 | 2.1 | 2.1 | 2.4 | 3.1 |  |  |  |  |  |  |  |
| '64QAM' | 2.4 | 2.1 | 2.4 | 2.4 | 2.1 | 2.1 | 3.1 | 2.1 | 2.1 | 2.4 | 3.1 |  |  |  |  |  |  |  |
| '256QAM' | 4.6 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |  |  |  |  |  |  |  |
| '20MHz+30MHz' | Scenario # | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 | #21 |  |  |  |  |  |  |  |  |
| 'QPSK' | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.6 | 0.8 | 2.1 | 2.4 | 3.1 |  |  |  |  |  |  |  |  |
| '16QAM' | 0.3 | 0.3 | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 | 2.1 | 2.4 | 3.1 |  |  |  |  |  |  |  |  |
| '64QAM' | 1.7 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.4 | 3.1 |  |  |  |  |  |  |  |  |
| '256QAM' | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |  |  |  |  |  |  |  |  |
| '20MHz+40MHz' | Scenario # | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 | #31 |  |  |  |  |  |  |  |  |
| 'QPSK' | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 1.1 | 2.4 | 2.7 | 3.1 |  |  |  |  |  |  |  |  |
| '16QAM' | 0.0 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 1.1 | 2.4 | 2.7 | 3.1 |  |  |  |  |  |  |  |  |
| '64QAM' | 1.7 | 2.1 | 2.1 | 2.1 | 2.1 | 2.4 | 2.1 | 2.4 | 2.7 | 3.1 |  |  |  |  |  |  |  |  |
| '256QAM' | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |  |  |  |  |  |  |  |  |
| '30MHz+40MHz' | Scenario # | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 | #41 | #43 |  |  |  |  |  |  |  |
| 'QPSK' | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 1.7 | 3.1 | 1.7 | 2.1 | 2.4 | 3.1 |  |  |  |  |  |  |  |
| '16QAM' | 0.3 | 0.3 | 0.3 | 0.6 | 0.8 | 1.7 | 3.1 | 1.7 | 2.1 | 2.7 | 3.1 |  |  |  |  |  |  |  |
| '64QAM' | 1.7 | 2.1 | 1.7 | 2.1 | 2.1 | 2.1 | 3.1 | 2.1 | 2.1 | 2.4 | 3.1 |  |  |  |  |  |  |  |
| '256QAM' | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |  |  |  |  |  |  |  |
| '20MHz+20MHz' | Scenario # | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 | #54 |
| 'QPSK' | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 3.1 | 1.1 | 2.7 | 2.7 | 3.1 |
| '16QAM' | 0.0 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 3.1 | 1.1 | 2.7 | 2.7 | 3.1 |
| '64QAM' | 1.7 | 2.1 | 2.1 | 2.1 | 2.1 | 2.4 | 3.1 | 2.1 | 2.7 | 2.7 | 3.1 |
| '256QAM' | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| '10MHz+30MHz' | Scenario # | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 |
| 'QPSK' | 0.3 | 0.8 | 1.1 | 1.4 | 1.4 | 1.7 | 3.1 | 1.7 | 2.4 | 3.1 | 3.1 |
| '16QAM' | 0.3 | 0.8 | 1.1 | 1.4 | 1.4 | 1.7 | 3.1 | 1.7 | 2.4 | 3.1 | 3.1 |
| '64QAM' | 1.7 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 3.1 | 2.1 | 2.4 | 3.1 | 3.1 |
| '256QAM' | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |

Table 6.1.2.1.1-6: PSSCH/PSCCH MPR simulation results for contiguous RB allocations with 2x23dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |  |  |  |  |  |  |  |
| 'QPSK' | 0.6 | 0.6 | 0.6 | 0.6 | 1.8 | 3.0 | 4.7 | 3.3 | 3.6 | 4.3 | 4.7 |  |  |  |  |  |  |  |
| '16QAM' | 1.8 | 1.8 | 2.1 | 1.8 | 1.8 | 3.3 | 4.7 | 3.3 | 3.6 | 4.3 | 4.7 |  |  |  |  |  |  |  |
| '64QAM' | 3.6 | 3.6 | 3.6 | 3.6 | 3.3 | 3.3 | 4.7 | 3.3 | 3.3 | 4.3 | 4.7 |  |  |  |  |  |  |  |
| '256QAM' | 5.8 | 5.8 | 5.8 | 5.8 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |  |  |  |  |  |  |  |
| '20MHz+30MHz' | Scenario # | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 | #21 |  |  |  |  |  |  |  |  |
| 'QPSK' | 0.2 | 0.2 | 0.4 | 0.4 | 1.8 | 2.1 | 2.4 | 4.0 | 4.3 | 4.7 |  |  |  |  |  |  |  |  |
| '16QAM' | 1.5 | 1.5 | 1.8 | 1.8 | 1.8 | 2.1 | 2.4 | 4.0 | 4.3 | 4.7 |  |  |  |  |  |  |  |  |
| '64QAM' | 3.0 | 3.3 | 3.3 | 3.3 | 3.6 | 3.3 | 3.3 | 4.0 | 4.3 | 5.0 |  |  |  |  |  |  |  |  |
| '256QAM' | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |  |  |  |  |  |  |  |  |
| '20MHz+40MHz' | Scenario # | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 | #31 |  |  |  |  |  |  |  |  |
| 'QPSK' | 0.0 | 0.4 | 0.4 | 0.6 | 1.0 | 2.1 | 2.7 | 4.3 | 4.7 | 5.0 |  |  |  |  |  |  |  |  |
| '16QAM' | 1.5 | 1.8 | 1.8 | 1.8 | 2.1 | 2.1 | 2.7 | 4.3 | 4.7 | 5.0 |  |  |  |  |  |  |  |  |
| '64QAM' | 3.0 | 3.3 | 3.3 | 3.3 | 3.6 | 3.6 | 3.3 | 4.3 | 4.7 | 5.0 |  |  |  |  |  |  |  |  |
| '256QAM' | 5.4 | 5.4 | 5.4 | 5.4 | 5.8 | 5.8 | 5.4 | 5.4 | 5.8 | 5.8 |  |  |  |  |  |  |  |  |
| '30MHz+40MHz' | Scenario # | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 | #41 | #43 |  |  |  |  |  |  |  |
| 'QPSK' | 0.2 | 0.2 | 0.2 | 0.8 | 2.1 | 3.0 | 4.7 | 3.3 | 3.6 | 4.3 | 5.0 |  |  |  |  |  |  |  |
| '16QAM' | 1.5 | 1.5 | 1.5 | 1.8 | 2.1 | 3.0 | 4.7 | 3.3 | 3.6 | 4.3 | 5.0 |  |  |  |  |  |  |  |
| '64QAM' | 3.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 4.7 | 3.3 | 3.6 | 4.3 | 5.0 |  |  |  |  |  |  |  |
| '256QAM' | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.8 | 5.4 |  |  |  |  |  |  |  |
| '20MHz+20MHz' | Scenario # | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 | #54 |
| 'QPSK' | 0.0 | 0.4 | 0.4 | 0.6 | 0.8 | 2.1 | 5.0 | 2.7 | 4.3 | 4.3 | 5.0 |
| '16QAM' | 1.3 | 1.8 | 1.8 | 1.8 | 2.1 | 2.1 | 5.0 | 2.7 | 4.3 | 4.3 | 5.0 |
| '64QAM' | 3.0 | 3.3 | 3.3 | 3.6 | 3.6 | 3.6 | 5.0 | 3.3 | 4.3 | 4.3 | 5.0 |
| '256QAM' | 5.4 | 5.4 | 5.4 | 5.4 | 5.8 | 5.8 | 5.8 | 5.4 | 5.8 | 5.8 | 5.8 |
| '10MHz+30MHz' | Scenario # | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 |
| 'QPSK' | 1.5 | 1.8 | 2.4 | 2.7 | 2.7 | 3.3 | 4.7 | 3.3 | 4.3 | 4.7 | 5.0 |
| '16QAM' | 1.5 | 2.1 | 2.4 | 2.7 | 2.7 | 3.3 | 4.7 | 3.3 | 4.3 | 4.7 | 5.0 |
| '64QAM' | 3.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.6 | 4.7 | 3.3 | 4.3 | 4.7 | 5.0 |
| '256QAM' | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.8 | 5.4 | 5.8 | 5.4 | 5.4 |

Table 6.1.2.1.1-7: PSSCH/PSCCH MPR simulation results for contiguous RB allocations with 2x23dBm+2LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |  |  |  |  |  |  |  |
| 'QPSK' | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 2.2 | 0.3 | 0.6 | 1.9 | 3.0 |  |  |  |  |  |  |  |
| '16QAM' | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 2.2 | 1.2 | 1.2 | 1.9 | 3.0 |  |  |  |  |  |  |  |
| '64QAM' | 2.2 | 2.2 | 2.6 | 2.2 | 2.2 | 2.2 | 2.2 | 2.6 | 2.2 | 2.2 | 3.0 |  |  |  |  |  |  |  |
| '256QAM' | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.6 | 4.6 | 4.6 | 4.2 | 4.2 |  |  |  |  |  |  |  |
| '20MHz+30MHz' | Scenario # | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 | #21 |  |  |  |  |  |  |  |  |
| 'QPSK' | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 1.2 | 1.9 | 3.0 |  |  |  |  |  |  |  |  |
| '16QAM' | 0.9 | 0.9 | 0.9 | 1.2 | 1.2 | 1.2 | 0.9 | 1.2 | 1.8 | 3.0 |  |  |  |  |  |  |  |  |
| '64QAM' | 2.2 | 1.8 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 3.0 |  |  |  |  |  |  |  |  |
| '256QAM' | 3.8 | 3.8 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |  |  |  |  |  |  |  |  |
| '20MHz+40MHz' | Scenario # | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 | #31 |  |  |  |  |  |  |  |  |
| 'QPSK' | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.6 | 0.1 | 1.8 | 2.6 | 3.4 |  |  |  |  |  |  |  |  |
| '16QAM' | 0.9 | 0.9 | 0.9 | 1.2 | 1.2 | 1.2 | 0.9 | 1.8 | 2.6 | 3.4 |  |  |  |  |  |  |  |  |
| '64QAM' | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.6 | 3.4 |  |  |  |  |  |  |  |  |
| '256QAM' | 3.8 | 3.8 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |  |  |  |  |  |  |  |  |
| '30MHz+40MHz' | Scenario # | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 | #41 | #43 |  |  |  |  |  |  |  |
| 'QPSK' | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 | 2.2 | 0.3 | 0.9 | 2.2 | 3.0 |  |  |  |  |  |  |  |
| '16QAM' | 0.9 | 0.9 | 0.9 | 0.9 | 1.2 | 1.2 | 2.2 | 1.2 | 0.9 | 2.2 | 3.0 |  |  |  |  |  |  |  |
| '64QAM' | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 3.0 |  |  |  |  |  |  |  |
| '256QAM' | 3.8 | 3.8 | 3.8 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |  |  |  |  |  |  |  |
| '20MHz+20MHz' | Scenario # | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 | #54 |
| 'QPSK' | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 2.6 | 0.3 | 2.2 | 2.2 | 3.0 |
| '16QAM' | 0.9 | 0.9 | 1.2 | 1.2 | 1.2 | 1.2 | 2.6 | 1.2 | 2.2 | 2.2 | 3.0 |
| '64QAM' | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.6 | 2.2 | 2.2 | 2.2 | 3.0 |
| '256QAM' | 3.8 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |
| '10MHz+30MHz' | Scenario # | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 |
| 'QPSK' | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 | 1.2 | 3.0 | 1.2 | 2.2 | 3.0 | 3.4 |
| '16QAM' | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 1.2 | 3.0 | 1.2 | 2.2 | 3.4 | 3.4 |
| '64QAM' | 2.2 | 1.8 | 2.2 | 2.2 | 2.2 | 2.2 | 3.0 | 2.2 | 2.2 | 3.4 | 3.4 |
| '256QAM' | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |

Table 6.1.2.1.1-8, Table 6.1.2.1.1-9, and Table 6.1.2.1.1-10 show the maximum value of simulation results for SL Contiguous CA of Contiguous RB allocations with architecture #1-1, #1-2, and #2-1 respectively considering Inner RB allocation and Outer RB allocation as NR uplink Contiguous CA.

Table 6.1.2.1.1-8: PSSCH/PSCCH MPR simulation results for contiguous RB allocations with 1x26dBm+1LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | Inner | Outer |
| CP-OFDM | QPSK | 1.4 | 3.1 |
|  | 16QAM | 1.4 | 3.1 |
|  | 64QAM | 2.4 | 3.1 |
|  | 256QAM | 4.6 | 4.2 |

Table 6.1.2.1.1-9: PSSCH/PSCCH MPR simulation results for contiguous RB allocations with 2x23dBm+1LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | Inner | Outer |
| CP-OFDM | QPSK | 2.7 | 5.0 |
|  | 16QAM | 2.7 | 5.0 |
|  | 64QAM | 3.6 | 5.0 |
|  | 256QAM | 5.8 | 5.8 |

Table 6.1.2.1.1-10: PSSCH/PSCCH MPR simulation results for contiguous RB allocations with 2x23dBm+2LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | Inner | Outer |
| CP-OFDM | QPSK | 0.3 | 3.4 |
|  | 16QAM | 1.2 | 3.4 |
|  | 64QAM | 2.6 | 3.4 |
|  | 256QAM | 4.2 | 4.6 |

The MPR can be proposed as Table 6.1.2.1.1-11, Table 6.1.2.1.1-12, and Table 6.1.2.1.1-13 based on the simulation results when considering implementation margin.

Table 6.1.2.1.1-11: PSSCH/PSCCH MPR for contiguous RB allocations with 1x26dBm+1LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | Inner | Outer |
| CP-OFDM | QPSK | ≤ 2.5 | ≤ 5.0 |
|  | 16QAM | ≤ 3.0 | ≤ 5.0 |
|  | 64QAM | ≤ 4.5 | ≤ 5.0 |
|  | 256QAM | ≤ 7.0 | ≤ 7.0 |

Table 6.1.2.1.1-12: PSSCH/PSCCH MPR for contiguous RB allocations with 2x23dBm+1LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | Inner | Outer |
| CP-OFDM | QPSK | ≤ 3.5 | ≤ 6.0 |
|  | 16QAM | ≤ 3.5 | ≤ 6.0 |
|  | 64QAM | ≤ 4.5 | ≤ 6.0 |
|  | 256QAM | ≤ 7.5 | ≤ 7.5 |

Table 6.1.2.1.1-13: PSSCH/PSCCH MPR for contiguous RB allocations with 2x23dBm+2LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | Inner | Outer |
| CP-OFDM | QPSK | ≤ 2.0 | ≤ 5.0 |
|  | 16QAM | ≤ 2.5 | ≤ 5.0 |
|  | 64QAM | ≤ 4.5 | ≤ 5.0 |
|  | 256QAM | ≤ 7.0 | ≤ 7.0 |

< Simulation results for non-contiguous RB allocations >

Table 6.1.2.1.1-14, Table 6.1.2.1.1-15, and Table 6.1.2.1.1-16 show the MPR simulation results for non-contiguous RB allocations with architecture #1-1, #1-2, and #2-1 in Table 6.1.2.1.1-1 respectively.

Table 6.1.2.1.1-14: PSSCH/PSCCH MPR simulation results for Non-contiguous RB allocations with 1x26dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |  |  |
| 'QPSK' | 7.1 | 3.5 | 3.5 | 3.1 | 0.0 | 0.0 | 0.2 | 5.2 | 2.7 | 2.7 | 0.5 | 4.8 | 2.4 | 2.4 | 2.0 | 3.5 |  |  |
| '16QAM' | 7.1 | 3.5 | 3.5 | 3.1 | 1.0 | 1.1 | 1.4 | 5.2 | 2.7 | 2.7 | 1.0 | 4.8 | 2.4 | 2.4 | 2.0 | 3.5 |  |  |
| '64QAM' | 7.1 | 3.5 | 3.5 | 3.1 | 2.3 | 2.4 | 2.4 | 5.2 | 2.7 | 2.7 | 2.4 | 4.8 | 2.4 | 2.4 | 2.3 | 3.5 |  |  |
| '256QAM' | 7.1 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.3 | 5.2 | 3.9 | 3.9 | 4.3 | 4.8 | 3.9 | 3.9 | 4.3 | 4.3 |  |  |
| '20MHz+30MHz' | Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 | #33 | #34 |
| 'QPSK' | 5.7 | 3.5 | 3.5 | 0.8 | 0.0 | 0.0 | 0.0 | 3.5 | 3.1 | 3.1 | 0.8 | 3.5 | 3.1 | 3.1 | 2.0 | 3.5 | 3.5 | 3.5 |
| '16QAM' | 5.7 | 3.5 | 3.5 | 0.8 | 0.7 | 0.8 | 1.0 | 3.5 | 3.1 | 3.1 | 1.0 | 3.5 | 3.1 | 3.1 | 2.0 | 3.5 | 3.5 | 3.5 |
| '64QAM' | 5.7 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 2.0 | 3.5 | 3.1 | 3.1 | 2.3 | 3.5 | 3.1 | 3.1 | 2.3 | 3.5 | 3.5 | 3.5 |
| '256QAM' | 5.7 | 3.5 | 3.9 | 3.5 | 3.9 | 3.5 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.3 | 3.9 | 4.3 | 4.3 |
| '20MHz+40MHz' | Scenario # | #35 | #36 | #37 | #38 | #39 | #40 | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 |  |
| 'QPSK' | 5.7 | 3.5 | 3.5 | 0.0 | 0.0 | 0.0 | 3.9 | 3.5 | 3.5 | 1.3 | 3.9 | 3.5 | 3.5 | 2.3 | 3.9 | 3.9 | 3.5 |  |
| '16QAM' | 5.7 | 3.5 | 3.5 | 0.8 | 0.7 | 0.7 | 3.5 | 3.5 | 3.5 | 1.3 | 3.5 | 3.5 | 3.5 | 2.3 | 3.9 | 3.9 | 3.5 |  |
| '64QAM' | 5.7 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 3.9 | 3.5 | 3.5 | 2.3 | 3.5 | 3.5 | 3.5 | 2.3 | 3.9 | 3.9 | 3.5 |  |
| '256QAM' | 5.7 | 3.9 | 3.5 | 3.5 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.3 | 3.9 | 4.3 | 4.3 |  |
| '30MHz+40MHz' | Scenario # | #52 | #53 | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 | #67 | #68 | #69 |
| 'QPSK' | 5.7 | 3.5 | 3.5 | 0.0 | 0.0 | 0.0 | 3.5 | 3.5 | 3.5 | 0.0 | 0.0 | 3.5 | 3.5 | 3.5 | 0.2 | 3.9 | 3.5 | 3.5 |
| '16QAM' | 5.7 | 3.5 | 3.5 | 0.8 | 0.7 | 0.7 | 3.5 | 3.5 | 3.5 | 1.0 | 1.0 | 3.5 | 3.5 | 3.5 | 1.0 | 3.9 | 3.5 | 3.5 |
| '64QAM' | 5.7 | 3.5 | 3.5 | 2.0 | 2.0 | 2.0 | 3.5 | 3.5 | 3.5 | 2.0 | 2.0 | 3.5 | 3.5 | 3.5 | 2.3 | 3.9 | 3.9 | 3.5 |
| '256QAM' | 5.7 | 3.9 | 3.5 | 3.9 | 3.5 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.3 | 3.9 | 4.3 | 4.3 |
| '20MHz+20MHz' | Scenario # | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 | #81 | #82 | #84 | #84 | #85 |
| 'QPSK' | 5.7 | 3.5 | 3.5 | 3.1 | 0.0 | 0.0 | 0.0 | 3.5 | 3.1 | 3.1 | 1.0 | 3.9 | 2.7 | 2.7 | 2.0 | 3.5 |
| '16QAM' | 5.7 | 3.5 | 3.5 | 3.1 | 0.7 | 0.8 | 0.7 | 3.5 | 3.1 | 3.1 | 1.0 | 3.9 | 2.7 | 2.7 | 2.0 | 3.5 |
| '64QAM' | 5.7 | 3.5 | 3.5 | 3.1 | 2.0 | 2.0 | 2.0 | 3.9 | 3.1 | 3.1 | 2.3 | 3.9 | 2.7 | 2.7 | 2.4 | 3.5 |
| '256QAM' | 5.7 | 3.5 | 3.5 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.3 | 4.3 |
| '10MHz+30MHz' | Scenario # | #86 | #87 | #88 | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 | #97 | #98 | #99 | #100 | #101 |
| 'QPSK' | 5.7 | 3.5 | 3.5 | 2.7 | 0.8 | 5.2 | 3.5 | 3.5 | 1.3 | 3.9 | 3.1 | 3.5 | 2.3 | 3.9 | 3.5 | 3.5 |
| '16QAM' | 5.7 | 3.5 | 3.5 | 2.7 | 0.8 | 5.2 | 3.5 | 3.5 | 1.3 | 3.9 | 3.5 | 3.5 | 2.0 | 3.9 | 3.5 | 3.5 |
| '64QAM' | 5.7 | 3.5 | 3.5 | 2.7 | 2.0 | 5.2 | 3.5 | 3.5 | 2.0 | 3.9 | 3.5 | 3.5 | 2.4 | 3.9 | 3.5 | 3.5 |
| '256QAM' | 5.7 | 3.9 | 3.5 | 3.9 | 3.9 | 5.2 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 4.3 | 4.3 |

Table 6.1.2.1.1-15: PSSCH/PSCCH MPR simulation results for Non-contiguous RB allocations with 2x23dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |  |  |
| 'QPSK' | 8.2 | 5.0 | 5.0 | 4.6 | 1.1 | 1.1 | 1.3 | 6.3 | 4.2 | 4.2 | 2.1 | 5.9 | 3.8 | 3.8 | 3.4 | 5.0 |  |  |
| '16QAM' | 8.2 | 5.0 | 5.0 | 4.6 | 2.1 | 2.1 | 2.1 | 6.3 | 4.2 | 4.2 | 2.1 | 5.9 | 3.8 | 3.8 | 3.4 | 5.0 |  |  |
| '64QAM' | 8.2 | 5.0 | 5.0 | 4.6 | 3.4 | 3.1 | 3.4 | 6.3 | 4.6 | 4.2 | 3.4 | 5.9 | 3.8 | 3.8 | 3.4 | 5.0 |  |  |
| '256QAM' | 8.2 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.3 | 5.0 | 5.0 | 5.0 | 5.9 | 5.0 | 5.0 | 5.0 | 5.0 |  |  |
| '20MHz+30MHz' | Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 | #33 | #34 |
| 'QPSK' | 6.8 | 5.0 | 5.0 | 1.8 | 0.9 | 0.6 | 0.9 | 5.0 | 4.6 | 4.6 | 2.4 | 5.0 | 4.6 | 4.6 | 3.4 | 5.0 | 5.0 | 5.0 |
| '16QAM' | 6.8 | 5.0 | 5.0 | 1.8 | 1.8 | 1.8 | 1.8 | 5.0 | 4.6 | 4.6 | 2.4 | 5.4 | 4.6 | 4.6 | 3.4 | 5.0 | 5.0 | 5.0 |
| '64QAM' | 6.8 | 5.0 | 5.0 | 3.1 | 3.1 | 3.1 | 3.1 | 5.5 | 4.6 | 4.6 | 3.4 | 5.0 | 4.6 | 4.6 | 3.4 | 5.0 | 5.0 | 5.0 |
| '256QAM' | 6.8 | 5.0 | 5.0 | 4.6 | 4.6 | 4.6 | 5.0 | 5.0 | 4.6 | 4.6 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.4 | 5.0 | 5.0 |
| '20MHz+40MHz' | Scenario # | #35 | #36 | #37 | #38 | #39 | #40 | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 |  |
| 'QPSK' | 6.8 | 5.4 | 5.0 | 0.6 | 0.8 | 0.8 | 5.4 | 5.0 | 5.0 | 2.7 | 5.4 | 5.0 | 5.0 | 3.8 | 5.4 | 5.4 | 5.0 |  |
| '16QAM' | 6.8 | 5.0 | 5.0 | 1.8 | 1.8 | 1.8 | 5.4 | 5.0 | 5.0 | 2.7 | 5.4 | 5.0 | 5.0 | 3.8 | 5.4 | 5.4 | 5.0 |  |
| '64QAM' | 6.8 | 5.4 | 5.0 | 3.1 | 3.1 | 3.1 | 5.4 | 5.0 | 5.0 | 3.1 | 5.4 | 5.0 | 5.0 | 3.8 | 5.4 | 5.4 | 5.0 |  |
| '256QAM' | 6.8 | 5.4 | 5.0 | 4.6 | 4.6 | 4.6 | 5.4 | 5.0 | 5.0 | 5.0 | 5.4 | 5.0 | 5.0 | 5.0 | 5.4 | 5.4 | 5.4 |  |
| '30MHz+40MHz' | Scenario # | #52 | #53 | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 | #67 | #68 | #69 |
| 'QPSK' | 6.8 | 5.0 | 5.0 | 0.9 | 0.8 | 0.8 | 5.4 | 5.0 | 5.0 | 1.1 | 1.1 | 5.0 | 5.0 | 5.0 | 1.1 | 5.4 | 5.4 | 5.0 |
| '16QAM' | 6.8 | 5.0 | 5.0 | 1.8 | 1.8 | 1.8 | 5.4 | 5.0 | 5.0 | 2.1 | 2.1 | 5.0 | 5.0 | 5.0 | 2.1 | 5.4 | 5.0 | 5.0 |
| '64QAM' | 6.8 | 5.0 | 5.0 | 3.1 | 3.1 | 3.1 | 5.4 | 5.0 | 5.0 | 3.1 | 3.1 | 5.4 | 5.0 | 5.0 | 3.4 | 5.4 | 5.4 | 5.0 |
| '256QAM' | 6.8 | 5.0 | 5.0 | 4.6 | 4.6 | 5.0 | 5.4 | 5.0 | 5.0 | 5.0 | 5.0 | 5.4 | 5.0 | 5.0 | 5.0 | 5.4 | 5.4 | 5.4 |
| '20MHz+20MHz' | Scenario # | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 | #81 | #82 | #84 | #84 | #85 |
| 'QPSK' | 6.8 | 5.0 | 5.0 | 1.8 | 0.9 | 0.6 | 0.9 | 5.0 | 4.6 | 4.6 | 2.4 | 5.0 | 4.6 | 4.6 | 3.4 | 5.0 |
| '16QAM' | 6.8 | 5.0 | 5.0 | 1.8 | 1.8 | 1.8 | 1.8 | 5.0 | 4.6 | 4.6 | 2.4 | 5.4 | 4.6 | 4.6 | 3.4 | 5.0 |
| '64QAM' | 6.8 | 5.0 | 5.0 | 3.1 | 3.1 | 3.1 | 3.1 | 5.5 | 4.6 | 4.6 | 3.4 | 5.0 | 4.6 | 4.6 | 3.4 | 5.0 |
| '256QAM' | 6.8 | 5.0 | 5.0 | 4.6 | 4.6 | 4.6 | 5.0 | 5.0 | 4.6 | 4.6 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.4 |
| '10MHz+30MHz' | Scenario # | #86 | #87 | #88 | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 | #97 | #98 | #99 | #100 | #101 |
| 'QPSK' | 6.8 | 5.0 | 5.0 | 4.2 | 1.8 | 6.3 | 5.4 | 5.4 | 2.7 | 5.4 | 5.0 | 5.0 | 3.8 | 5.4 | 5.4 | 5.0 |
| '16QAM' | 6.8 | 5.0 | 5.0 | 4.2 | 1.8 | 6.3 | 5.4 | 5.0 | 2.7 | 5.5 | 5.0 | 5.0 | 3.8 | 5.4 | 5.0 | 5.0 |
| '64QAM' | 6.8 | 5.0 | 5.0 | 4.2 | 3.1 | 6.3 | 5.4 | 5.4 | 3.1 | 5.9 | 5.0 | 5.0 | 3.8 | 5.4 | 5.0 | 5.0 |
| '256QAM' | 6.8 | 5.0 | 5.0 | 4.6 | 5.0 | 6.3 | 5.4 | 5.0 | 5.0 | 5.4 | 5.0 | 5.0 | 5.0 | 5.4 | 5.0 | 5.4 |

Table 6.1.2.1.1-16: PSSCH/PSCCH MPR simulation results for Non-contiguous RB allocations with 2x23dBm+2LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |  |  |
| 'QPSK' | 3.0 | 2.6 | 2.6 | 1.5 | 0.1 | 0.1 | 0.1 | 3.4 | 1.5 | 1.5 | 0.1 | 3.4 | 0.9 | 0.9 | 0.3 | 3.0 |  |  |
| '16QAM' | 3.0 | 2.6 | 2.6 | 1.5 | 1.2 | 1.2 | 1.2 | 3.4 | 1.5 | 1.5 | 1.2 | 3.4 | 1.2 | 1.2 | 1.2 | 3.0 |  |  |
| '64QAM' | 3.0 | 2.6 | 2.6 | 2.2 | 2.2 | 2.2 | 2.2 | 3.4 | 2.2 | 2.2 | 2.2 | 3.4 | 2.2 | 2.2 | 2.2 | 3.0 |  |  |
| '256QAM' | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |  |  |
| '20MHz+30MHz' | Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 | #33 | #34 |
| 'QPSK' | 2.6 | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 1.8 | 1.8 | 0.0 | 3.0 | 1.8 | 1.9 | 0.1 | 3.4 | 3.0 | 3.0 |
| '16QAM' | 2.6 | 2.2 | 2.2 | 0.9 | 0.9 | 0.9 | 0.9 | 3.0 | 1.9 | 1.9 | 0.9 | 3.0 | 1.8 | 1.8 | 1.2 | 3.4 | 3.0 | 3.0 |
| '64QAM' | 2.6 | 2.2 | 2.2 | 2.2 | 2.2 | 1.8 | 2.2 | 3.0 | 2.2 | 2.2 | 2.2 | 3.0 | 2.2 | 2.2 | 2.2 | 3.4 | 3.0 | 3.0 |
| '256QAM' | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 3.8 | 3.8 | 3.8 | 4.2 | 3.8 | 4.2 | 4.2 |
| '20MHz+40MHz' | Scenario # | #35 | #36 | #37 | #38 | #39 | #40 | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 |  |
| 'QPSK' | 3.0 | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 | 3.4 | 2.2 | 2.2 | 0.1 | 3.4 | 2.2 | 2.2 | 0.3 | 3.4 | 3.0 | 3.4 |  |
| '16QAM' | 3.0 | 2.2 | 2.2 | 0.9 | 0.9 | 0.9 | 3.4 | 2.2 | 2.2 | 0.9 | 3.4 | 2.2 | 2.2 | 0.9 | 3.4 | 3.0 | 3.4 |  |
| '64QAM' | 3.0 | 2.2 | 2.2 | 2.2 | 1.8 | 2.2 | 3.4 | 2.2 | 2.2 | 2.2 | 3.4 | 2.2 | 2.2 | 2.2 | 3.4 | 3.0 | 3.4 |  |
| '256QAM' | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 3.8 | 4.2 | 3.8 | 4.2 | 4.2 |  |
| '30MHz+40MHz' | Scenario # | #52 | #53 | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 | #67 | #68 | #69 |
| 'QPSK' | 3.0 | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 | 3.0 | 2.2 | 2.2 | 0.0 | 0.0 | 3.0 | 2.2 | 1.8 | 0.1 | 3.4 | 2.6 | 3.4 |
| '16QAM' | 3.0 | 2.2 | 2.2 | 0.9 | 0.9 | 0.9 | 3.0 | 2.2 | 2.2 | 0.9 | 0.9 | 3.4 | 2.2 | 2.2 | 0.9 | 3.4 | 2.6 | 3.4 |
| '64QAM' | 3.0 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 3.0 | 2.2 | 2.2 | 2.2 | 2.2 | 3.4 | 2.2 | 2.2 | 2.2 | 3.4 | 2.6 | 3.4 |
| '256QAM' | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 3.8 | 4.2 | 4.2 |
| '20MHz+20MHz' | Scenario # | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 | #81 | #82 | #84 | #84 | #85 |
| 'QPSK' | 3.0 | 2.2 | 2.2 | 1.8 | 0.0 | 0.0 | 0.0 | 3.0 | 1.5 | 1.5 | 0.1 | 3.4 | 1.2 | 1.2 | 0.6 | 3.0 |
| '16QAM' | 3.0 | 2.2 | 2.2 | 1.9 | 0.9 | 0.9 | 0.9 | 3.0 | 1.9 | 1.5 | 0.9 | 3.4 | 1.2 | 1.2 | 0.9 | 3.0 |
| '64QAM' | 3.0 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 3.0 | 2.2 | 2.2 | 2.2 | 3.4 | 2.2 | 2.2 | 2.2 | 3.0 |
| '256QAM' | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 3.8 | 4.2 | 4.2 | 4.2 | 4.2 |
| '10MHz+30MHz' | Scenario # | #86 | #87 | #88 | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 | #97 | #98 | #99 | #100 | #101 |
| 'QPSK' | 3.0 | 2.2 | 2.2 | 0.9 | 0.1 | 3.0 | 2.2 | 2.2 | 0.3 | 3.4 | 2.2 | 2.2 | 0.9 | 3.4 | 2.6 | 3.4 |
| '16QAM' | 3.0 | 2.2 | 2.2 | 0.9 | 0.9 | 3.0 | 2.2 | 2.2 | 0.9 | 3.4 | 2.2 | 2.2 | 1.2 | 3.4 | 2.6 | 3.4 |
| '64QAM' | 3.0 | 2.2 | 2.2 | 1.8 | 2.2 | 3.0 | 2.2 | 2.2 | 2.2 | 3.4 | 2.2 | 2.2 | 2.2 | 3.4 | 2.6 | 3.4 |
| '256QAM' | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 4.2 | 3.8 | 4.2 | 4.2 |

Table 6.1.2.1.1-17, Table 6.1.2.1.1-18, and Table 6.1.2.1.1-19 show the maximum value of simulation results for Non-contiguous RB allocations with architecture #1-1, #1-2, and #2-1 respectively considering Inner/Outer1/Outer2 RB allocation as NR uplink Contiguous CA.

Table 6.1.2.1.1-17: PSSCH/PSCCH MPR simulation results for Non-contiguous RB allocations with 1x26dBm+1LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | Inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | 0.2 | 3.5 | 7.1 |
|  | 16QAM | 1.4 | 3.5 | 7.1 |
|  | 64QAM | 2.4 | 3.5 | 7.1 |
|  | 256QAM | 4.3 | 4.3 | 7.1 |

Table 6.1.2.1.1-18: PSSCH/PSCCH MPR simulation results for Non-contiguous RB allocations with 2x23dBm+1LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | Inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | 1.3 | 5.4 | 8.2 |
|  | 16QAM | 2.1 | 5.0 | 8.2 |
|  | 64QAM | 3.4 | 5.4 | 8.2 |
|  | 256QAM | 5.0 | 5.0 | 8.2 |

Table 6.1.2.1.1-19: PSSCH/PSCCH MPR simulation results for Non-contiguous RB allocations with 2x23dBm+2LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | Inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | 0.1 | 2.6 | 3.4 |
|  | 16QAM | 1.2 | 2.6 | 3.4 |
|  | 64QAM | 2.2 | 2.6 | 3.4 |
|  | 256QAM | 4.2 | 4.2 | 4.2 |

The MPR can be proposed as Table 6.1.2.1.1-20, Table 6.1.2.1.1-21, and Table 6.1.2.1.1-22 based on the simulation results when considering implementation margin.

Table 6.1.2.1.1-20: PSSCH/PSCCH MPR for Non-contiguous RB allocations with 1x26dBm+1LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | Inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | ≤ 3.5 | ≤ 7.5 | ≤ 11.0 |
|  | 16QAM | ≤ 4.0 | ≤ 7.5 | ≤ 11.0 |
|  | 64QAM | ≤ 5.5 | ≤ 7.5 | ≤ 11.0 |
|  | 256QAM | ≤ 8.0 | ≤ 8.0 | ≤ 11.0 |

Table 6.1.2.1.1-21: PSSCH/PSCCH MPR for Non-contiguous RB allocations with 2x23dBm+1LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | Inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | ≤ 4.5 | ≤ 8.5 | ≤ 12.0 |
|  | 16QAM | ≤ 4.5 | ≤ 8.5 | ≤ 12.0 |
|  | 64QAM | ≤ 7.0 | ≤ 8.5 | ≤ 12.0 |
|  | 256QAM | ≤ 9.0 | ≤ 9.0 | ≤ 12.0 |

Table 6.1.2.1.1-22: PSSCH/PSCCH MPR for Non-contiguous RB allocations with 2x23dBm+2LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | Inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | ≤ 3.5 | ≤ 6.5 | ≤ 7.5 |
|  | 16QAM | ≤ 4.0 | ≤ 6.5 | ≤ 7.5 |
|  | 64QAM | ≤ 5.5 | ≤ 6.5 | ≤ 7.5 |
|  | 256QAM | ≤ 8.0 | ≤ 8.0 | ≤ 8.0 |

##### 6.1.2.1.2 Simulation results from OPPO (R4-2415602)

Below is the configuration as shown in table 1.

Table 1, channel bandwidth and RB configuration

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| case | LCR  B1 | RBS  TAR  T1 | LCR  B2 | RBS  TAR  T2 | SC  S | CB  W1 | CB  W2 | RB  Alloc  ation | case | LCR  B1 | RBS  TAR  T1 | LCR  B2 | RBS  TAR  T2 | | SC  S | | CB  W1 | CB  W2 | RB  Alloc  ation |
| 1 | 10 | 42 | 10 | 0 | 15 | 10 | 10 | inner | 83 | 10 | 15 | 10 | 31 | | 30 | | 20 | 30 | outer2 |
| 2 | 10 | 42 | 12 | 0 | 15 | 10 | 10 | inner | 84 | 10 | 32 | 10 | 10 | | 30 | | 20 | 30 | outer2 |
| 3 | 10 | 42 | 15 | 0 | 15 | 10 | 10 | inner | 85 | 10 | 34 | 10 | 9 | | 30 | | 20 | 30 | outer1 |
| 4 | 10 | 42 | 25 | 0 | 15 | 10 | 10 | inner | 86 | 10 | 34 | 10 | 8 | | 30 | | 20 | 30 | outer1 |
| 5 | 10 | 42 | 30 | 0 | 15 | 10 | 10 | inner | 87 | 10 | 41 | 10 | 1 | | 30 | | 20 | 30 | outer1 |
| 6 | 10 | 42 | 36 | 0 | 15 | 10 | 10 | outer | 88 | 25 | 0 | 25 | 53 | | 30 | | 20 | 30 | inner |
| 7 | 10 | 42 | 50 | 0 | 15 | 10 | 10 | outer | 89 | 25 | 20 | 25 | 25 | | 30 | | 20 | 30 | outer2 |
| 8 | 12 | 40 | 36 | 0 | 15 | 10 | 10 | outer | 90 | 25 | 21 | 25 | 25 | | 30 | | 20 | 30 | outer2 |
| 9 | 25 | 27 | 36 | 0 | 15 | 10 | 10 | outer | 91 | 25 | 26 | 25 | 1 | | 30 | | 20 | 30 | outer2 |
| 10 | 40 | 12 | 40 | 0 | 15 | 10 | 10 | outer | 92 | 30 | 0 | 30 | 48 | | 30 | | 20 | 30 | outer1 |
| 11 | 50 | 2 | 50 | 0 | 15 | 10 | 10 | outer | 93 | 30 | 15 | 30 | 12 | | 30 | | 20 | 30 | outer2 |
| 12 | 10 | 41 | 10 | 0 | 30 | 20 | 30 | inner | 94 | 30 | 15 | 30 | 11 | | 30 | | 20 | 30 | outer2 |
| 13 | 10 | 41 | 12 | 0 | 30 | 20 | 30 | inner | 95 | 30 | 21 | 30 | 1 | | 30 | | 20 | 30 | outer2 |
| 14 | 10 | 41 | 25 | 0 | 30 | 20 | 30 | inner | 96 | 50 | 0 | 50 | 28 | | 30 | | 20 | 30 | outer1 |
| 15 | 10 | 41 | 30 | 0 | 30 | 20 | 30 | inner | 97 | 50 | 0 | 50 | 0 | | 30 | | 20 | 30 | outer2 |
| 16 | 10 | 41 | 48 | 0 | 30 | 20 | 30 | inner | 98 | 50 | 0 | 78 | 0 | | 30 | | 20 | 30 | outer2 |
| 17 | 10 | 41 | 50 | 0 | 30 | 20 | 30 | outer | 99 | 10 | 0 | 10 | 96 | | 30 | | 20 | 30 | outer2 |
| 18 | 25 | 26 | 36 | 0 | 30 | 20 | 30 | outer | 100 | 10 | 4 | 10 | 30 | | 30 | | 20 | 40 | outer2 |
| 19 | 36 | 15 | 36 | 0 | 30 | 20 | 30 | outer | 101 | 10 | 5 | 10 | 30 | | 30 | | 20 | 40 | outer2 |
| 20 | 40 | 11 | 40 | 0 | 30 | 20 | 30 | outer | 102 | 10 | 37 | 10 | 15 | | 30 | | 20 | 40 | outer2 |
| 21 | 50 | 1 | 75 | 0 | 30 | 20 | 30 | outer | 103 | 10 | 38 | 10 | 15 | | 30 | | 20 | 40 | outer1 |
| 22 | 10 | 41 | 10 | 0 | 30 | 20 | 30 | inner | 104 | 10 | 41 | 10 | 1 | | 30 | | 20 | 40 | outer1 |
| 23 | 10 | 41 | 25 | 0 | 30 | 20 | 30 | inner | 105 | 25 | 0 | 25 | 81 | | 30 | | 20 | 40 | inner |
| 24 | 10 | 41 | 36 | 0 | 30 | 20 | 30 | inner | 106 | 25 | 20 | 25 | 38 | | 30 | | 20 | 40 | outer2 |
| 25 | 10 | 41 | 48 | 0 | 30 | 20 | 30 | inner | 107 | 25 | 20 | 25 | 37 | | 30 | | 20 | 40 | outer2 |
| 26 | 10 | 41 | 60 | 0 | 30 | 20 | 30 | outer | 108 | 25 | 26 | 25 | 1 | | 30 | | 20 | 40 | outer2 |
| 27 | 10 | 41 | 70 | 0 | 30 | 20 | 30 | outer | 109 | 30 | 0 | 30 | 76 | | 30 | | 20 | 40 | outer1 |
| 28 | 25 | 26 | 36 | 0 | 30 | 20 | 30 | outer | 110 | 30 | 15 | 30 | 26 | | 30 | | 20 | 40 | outer2 |
| 29 | 36 | 15 | 70 | 0 | 30 | 20 | 30 | outer | 111 | 30 | 15 | 30 | 25 | | 30 | | 20 | 40 | outer2 |
| 30 | 40 | 11 | 78 | 0 | 30 | 20 | 30 | outer | 112 | 30 | 21 | 30 | 1 | | 30 | | 20 | 40 | outer2 |
| 31 | 50 | 1 | 78 | 0 | 30 | 20 | 30 | outer | 113 | 50 | 0 | 50 | 56 | | 30 | | 20 | 40 | outer1 |
| 32 | 10 | 68 | 10 | 0 | 30 | 30 | 40 | inner | 114 | 50 | 0 | 50 | 0 | | 30 | | 20 | 40 | outer2 |
| 33 | 10 | 68 | 25 | 0 | 30 | 30 | 40 | inner | 115 | 50 | 0 | 105 | 0 | | 30 | | 20 | 40 | outer2 |
| 34 | 10 | 68 | 36 | 0 | 30 | 30 | 40 | inner | 116 | 10 | 13 | 10 | 30 | | 30 | | 30 | 40 | outer2 |
| 35 | 10 | 68 | 48 | 0 | 30 | 30 | 40 | inner | 117 | 10 | 14 | 10 | 30 | | 30 | | 30 | 40 | outer2 |
| 36 | 10 | 68 | 60 | 0 | 30 | 30 | 40 | inner | 118 | 10 | 50 | 10 | 15 | | 30 | | 30 | 40 | outer2 |
| 37 | 10 | 68 | 70 | 0 | 30 | 30 | 40 | outer | 119 | 10 | 51 | 10 | 15 | | 30 | | 30 | 40 | outer1 |
| 38 | 10 | 68 | 105 | 0 | 30 | 30 | 40 | outer | 120 | 10 | 68 | 10 | 1 | | 30 | | 30 | 40 | outer1 |
| 39 | 25 | 53 | 70 | 0 | 30 | 30 | 40 | outer | 121 | 25 | 0 | 25 | 81 | | 30 | | 30 | 40 | inner |
| 40 | 36 | 42 | 90 | 0 | 30 | 30 | 40 | outer | 122 | 25 | 28 | 25 | 37 | | 30 | | 30 | 40 | outer2 |
| 41 | 40 | 38 | 90 | 0 | 30 | 30 | 40 | outer | 123 | 25 | 28 | 25 | 36 | | 30 | | 30 | 40 | outer2 |
| 42 | 75 | 3 | 105 | 0 | 30 | 30 | 40 | outer | 124 | 25 | 51 | 25 | 1 | | 30 | | 30 | 40 | outer2 |
| 43 | 10 | 41 | 10 | 0 | 30 | 20 | 20 | inner | 125 | 25 | 52 | 25 | 1 | | 30 | | 30 | 40 | outer1 |
| 44 | 10 | 41 | 12 | 0 | 30 | 20 | 20 | inner | 126 | 30 | 0 | 30 | 76 | | 30 | | 30 | 40 | inner |
| 45 | 10 | 41 | 15 | 0 | 30 | 20 | 20 | inner | 127 | 30 | 24 | 30 | 26 | | 30 | | 30 | 40 | outer2 |
| 46 | 10 | 41 | 25 | 0 | 30 | 20 | 20 | inner | 128 | 30 | 24 | 30 | 25 | | 30 | | 30 | 40 | outer2 |
| 47 | 10 | 41 | 30 | 0 | 30 | 20 | 20 | inner | 129 | 30 | 48 | 30 | 1 | | 30 | | 30 | 40 | outer2 |
| 48 | 10 | 41 | 36 | 0 | 30 | 20 | 20 | outer | 130 | 75 | 0 | 50 | 56 | | 30 | | 30 | 40 | outer1 |
| 49 | 10 | 41 | 50 | 0 | 30 | 20 | 20 | outer | 131 | 75 | 0 | 50 | 0 | | 30 | | 30 | 40 | outer2 |
| 50 | 12 | 39 | 36 | 0 | 30 | 20 | 20 | outer | 132 | 75 | 0 | 105 | 0 | | 30 | | 30 | 40 | outer2 |
| 51 | 25 | 26 | 36 | 0 | 30 | 20 | 20 | outer | 133 | 10 | 0 | 10 | 41 | | 30 | | 20 | 40 | outer2 |
| 52 | 40 | 11 | 40 | 0 | 30 | 20 | 20 | outer | 134 | 10 | 17 | 10 | 22 | | 30 | | 20 | 20 | outer2 |
| 53 | 50 | 1 | 50 | 0 | 30 | 20 | 20 | outer | 135 | 10 | 18 | 10 | 22 | | 30 | | 20 | 20 | outer2 |
| 54 | 4 | 20 | 10 | 0 | 30 | 10 | 30 | inner | 136 | 10 | 27 | 10 | 14 | | 30 | | 20 | 20 | outer2 |
| 55 | 4 | 20 | 12 | 0 | 30 | 10 | 30 | inner | 137 | 10 | 33 | 10 | 7 | | 30 | | 20 | 20 | outer2 |
| 56 | 4 | 20 | 15 | 0 | 30 | 10 | 30 | inner | 138 | 10 | 34 | 10 | 7 | | 30 | | 20 | 20 | outer1 |
| 57 | 4 | 20 | 20 | 0 | 30 | 10 | 30 | inner | 139 | 10 | 41 | 10 | 1 | | 30 | | 20 | 20 | outer1 |
| 58 | 4 | 20 | 25 | 0 | 30 | 10 | 30 | inner | 140 | 25 | 0 | 25 | 26 | | 30 | | 20 | 20 | inner |
| 59 | 4 | 20 | 50 | 0 | 30 | 10 | 30 | outer | 141 | 25 | 18 | 25 | 8 | | 30 | | 20 | 20 | outer2 |
| 60 | 4 | 20 | 75 | 0 | 30 | 10 | 30 | outer | 142 | 25 | 19 | 25 | 8 | | 30 | | 20 | 20 | outer2 |
| 61 | 12 | 12 | 36 | 0 | 30 | 10 | 30 | outer | 143 | 25 | 26 | 25 | 1 | | 30 | | 20 | 20 | outer2 |
| 62 | 15 | 9 | 60 | 0 | 30 | 10 | 30 | outer | 144 | 30 | 0 | 30 | 21 | | 30 | | 20 | 20 | outer1 |
| 63 | 20 | 4 | 75 | 0 | 30 | 10 | 30 | outer | 145 | 30 | 18 | 30 | 3 | | 30 | | 20 | 20 | outer2 |
| 64 | 24 | 0 | 75 | 0 | 30 | 10 | 30 | outer | 146 | 30 | 18 | 30 | 2 | | 30 | | 20 | 20 | outer2 |
| 65 | 10 | 0 | 10 | 42 | 15 | 10 | 10 | outer2 | 147 | 30 | 21 | 30 | 1 | | 30 | | 20 | 20 | outer2 |
| 66 | 10 | 18 | 10 | 22 | 15 | 10 | 10 | outer2 | 148 | 50 | 0 | 50 | 0 | | 30 | | 20 | 20 | outer1 |
| 67 | 10 | 19 | 10 | 22 | 15 | 10 | 10 | outer2 | 149 | 10 | 0 | 10 | 68 | | 30 | | 10 | 20 | outer2 |
| 68 | 10 | 27 | 10 | 14 | 15 | 10 | 10 | outer2 | 150 | 10 | 6 | 10 | 32 | | 30 | | 10 | 30 | outer2 |
| 69 | 10 | 33 | 10 | 7 | 15 | 10 | 10 | outer1 | 151 | 10 | 6 | 10 | 31 | | 30 | | 10 | 30 | outer2 |
| 70 | 10 | 34 | 10 | 7 | 15 | 10 | 10 | outer1 | 152 | 10 | 14 | 10 | 10 | | 30 | | 10 | 30 | outer2 |
| 71 | 10 | 42 | 10 | 1 | 15 | 10 | 10 | inner | 153 | 10 | 14 | 10 | 1 | | 30 | | 10 | 30 | outer1 |
| 72 | 25 | 0 | 25 | 27 | 15 | 10 | 10 | outer2 | 154 | 10 | 0 | 12 | 53 | | 30 | | 10 | 30 | outer1 |
| 73 | 25 | 19 | 25 | 8 | 15 | 10 | 10 | outer2 | 155 | 10 | 3 | 12 | 25 | | 30 | | 10 | 30 | outer2 |
| 74 | 25 | 20 | 25 | 8 | 15 | 10 | 10 | outer2 | 156 | 15 | 4 | 12 | 25 | | 30 | | 10 | 30 | outer2 |
| 75 | 25 | 27 | 25 | 1 | 15 | 10 | 10 | outer1 | 157 | 15 | 8 | 12 | 1 | | 30 | | 10 | 30 | outer2 |
| 76 | 30 | 0 | 30 | 22 | 15 | 10 | 10 | outer2 | 158 | 24 | 0 | 30 | 48 | | 30 | | 10 | 30 | outer1 |
| 77 | 30 | 19 | 30 | 3 | 15 | 10 | 10 | outer2 | 159 | 12 | 3 | 30 | 7 | | 30 | | 10 | 30 | outer2 |
| 78 | 30 | 19 | 30 | 2 | 15 | 10 | 10 | outer2 | 160 | 21 | 3 | 30 | 6 | | 30 | | 10 | 30 | outer2 |
| 79 | 30 | 22 | 30 | 1 | 15 | 10 | 10 | outer1 | 161 | 12 | 12 | 30 | 1 | | 30 | | 10 | 30 | outer2 |
| 80 | 50 | 1 | 50 | 0 | 15 | 10 | 10 | outer2 | 162 | 8 | 0 | 50 | 28 | | 30 | | 10 | 30 | outer1 |
| 81 | 10 | 0 | 10 | 68 | 30 | 20 | 30 | outer2 | 163 | 6 | 0 | 50 | 1 | | 30 | | 10 | 30 | outer2 |
| 82 | 10 | 15 | 10 | 32 | 30 | 20 | 30 | inner | 164 | 15 | 0 | 75 | 1 | 30 | | 10 | | 30 | outer2 |

Case 1 to 64 is for contiguous RB allocation and marked as orange in the “case” row. Case 65 to 164 is for non-contiguous RB allocation and marked as yellow in the “case” row.

According to the agreement in the previous RAN4 meeting, three different kinds of PA and LO architecture are considered as:

* + - 1 PA : 1x26dBm + 1LO
    - Dual Tx : 2x23dBm + 1LO
    - dualPA : 2x23dBm + 2LO

With that, we have provided the simulation results with the 3 different architecture as well as the table 1 configuration.

One 26dBm PA 1LO architecture

Figure 1 Contiguous CA contiguous RB allocation for single PA single LO

Figure 2 Contiguous CA non-contiguous RB allocation for single PA single LO

In this case, the largest simulation result table for 1 26dBm PA with 1LO has been provided as below table 1 and table 2:

Table 1: Contiguous RB allocation for Power Class 2

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | inner | outer |
| CP-OFDM | QPSK | ≤ 1.1 | ≤ 5.6 |
|  | 16QAM | ≤ 2.2 | ≤ 5.6 |
|  | 64QAM | ≤ 4 | ≤ 5.6 |
|  | 256QAM | ≤ 7.4 | ≤8.2 |

Table 2: non-contiguous RB allocation for Power Class 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | ≤ 0.7 | ≤ 4.1 | ≤ 6.2 |
|  | 16QAM | ≤ 1.6 | ≤ 4.1 | ≤ 6.1 |
|  | 64QAM | ≤ 3.1 | ≤ 4.0 | ≤ 6.2 |
|  | 256QAM | ≤ 6.1 | ≤6.2 | ≤ 6.2 |

Two 23dBm PA 1LO architecture

Figure 3 Contiguous CA contiguous RB allocation for Dual-PA single LO

Figure 4 Contiguous CA non-contiguous RB allocation for Dual-PA single LO

In this case, the largest simulation result table for 2 23dBm PA with 1LO has been provided as below table 3 and table 4:

Table 3: Contiguous RB allocation for Power Class 2 for Dual-PA single LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | inner | outer |
| CP-OFDM | QPSK | ≤ 3.0 | ≤ 7.1 |
|  | 16QAM | ≤ 3.1 | ≤ 7.1 |
|  | 64QAM | ≤ 4.7 | ≤ 7.2 |
|  | 256QAM | ≤ 7.5 | ≤8.1 |

Table 4: non-contiguous RB allocation for Power Class 2 for Dual-PA single LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | ≤ 3.5 | ≤ 7.0 | ≤ 9.0 |
|  | 16QAM | ≤ 4.4 | ≤ 7.0 | ≤ 9.0 |
|  | 64QAM | ≤ 6.1 | ≤ 7.0 | ≤ 9.0 |
|  | 256QAM | ≤ 9.1 | ≤ 9.1 | ≤ 9.1 |

Two 23dBm PA 2LO architecture

Figure 5 Contiguous CA contiguous RB allocation for Dual-PA Dual-LO

Figure 6 Contiguous CA non-contiguous RB allocation for Dual-PA Dual-LO

Table 5: Contiguous RB allocation for Power Class 2 for Dual-PA Dual-LO

|  |  |  |  |
| --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | |
|  | | inner | outer |
| CP-OFDM | QPSK | ≤ 0.9 | ≤ 5.9 |
|  | 16QAM | ≤ 1.8 | ≤ 5.9 |
|  | 64QAM | ≤ 3.4 | ≤ 5.9 |
|  | 256QAM | ≤ 5.9 | ≤ 6.3 |

Table 6: non-contiguous RB allocation for Power Class 2 for Dual-PA Dual-LO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modulation | | MPR for bandwidth class B(dB) | | |
|  | | inner | Outer1 | Outer2 |
| CP-OFDM | QPSK | ≤ 0.9 | ≤ 4.4 | ≤ 6.4 |
|  | 16QAM | ≤ 1.8 | ≤ 4.4 | ≤ 6.3 |
|  | 64QAM | ≤ 3.3 | ≤ 4.0 | ≤ 6.4 |
|  | 256QAM | ≤ 5.8 | ≤ 6.1 | ≤ 6.4 |

#### 6.1.2.2 MPR for PSFCH transmission

##### 6.1.2.2.1 Simulation results from LG Electronics (R4-2415894)

< UE RF architecture >

Architecture #1-1, #1-2, and #2-1 in Table 6.1.2.1.1-1 are considered for MPR evaluation.

< Simulation assumption >

The simulation assumption in Table 6.1.2.2.1-1 is considered.

Table 6.1.2.2.1-1. Simulation assumption

|  |  |
| --- | --- |
| Center frequency | 5.9GHz |
| Bandwidth | per CC: 10/20/30/40MHz  aggregated CBW: 10+10, 10+30, 20+20, 20+30, 20+40, 30+30 (MHz) |
| Maximum output power for aggregated CBW | 26dBm |
| Modulation for PSFCH | QPSK |
| PSFCH | ZC sequence |
| Structure of Slot | Baseline is to follow RAN1 agreements |
| Waveform | CP-OFDM |
| ACLR | 31dBc |
| Carrier leakage | 25dBc |
| IQ image | 34dBc |
| CIM3 | 60dBc |
| PA calibration | PA calibrated to deliver 30dBc ACLR for a fully allocated RBs in 20MHz QPSK DFT- S-OFDM waveform at 1 dB MPR.  This is based to share PA between LTE V2X and NR V2X at 5.9GHz as worst case. |

< Evaluation scenario >

The PSFCH MPR evaluation scenarios in Table 6.1.2.2.1-2 are considered for SL contiguous CA.

Table 6.1.2.2.1-2: SL contiguous CA MPR evaluation scenarios for PSFCH

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Aggregated CBW | Scenario | CC1 | CC2 | R | SCS |
| 10MHz + 10MHz | 1 | 1RB0 | - |  | 15 |
| 2 | 1RB51 | - |  | 15 |
| 3 | 1RB0 | 1RB0 | 0.5255 | 15 |
| 4 | 1RB0 | 1RB10 | 0.6185 | 15 |
| 5 | 1RB0 | 1RB20 | 0.7116 | 15 |
| 6 | 1RB0 | 1RB30 | 0.8046 | 15 |
| 7 | 1RB0 | 1RB40 | 0.8976 | 15 |
| 8 | 1RB0 | 1RB51 | 1.0 | 15 |
| 9 | 1RB10 | 1RB0 | 0.4324 | 15 |
| 10 | 1RB20 | 1RB0 | 0.3394 | 15 |
| 11 | 1RB30 | 1RB0 | 0.2463 | 15 |
| 12 | 1RB40 | 1RB0 | 0.1533 |  |
| 13 | 1RB51 | 1RB0 | 0.0509 | 15 |
| 20MHz + 30MHz | 14 | 1RB0 | - |  | 30 |
| 15 | 1RB50 | - |  | 30 |
| 16 | 1RB0 | 1RB0 | 0.4248 | 30 |
| 17 | 1RB0 | 1RB10 | 0.4995 | 30 |
| 18 | 1RB0 | 1RB20 | 0.5742 | 30 |
| 19 | 1RB0 | 1RB30 | 0.6489 | 30 |
| 20 | 1RB0 | 1RB40 | 0.7236 | 30 |
| 21 | 1RB0 | 1RB50 | 0.7983 | 30 |
| 22 | 1RB0 | 1RB60 | 0.8730 | 30 |
| 23 | 1RB0 | 1RB70 | 0.9477 | 30 |
| 24 | 1RB0 | 1RB77 | 1.0 | 30 |
| 25 | 1RB10 | 1RB0 | 0.3501 | 30 |
| 26 | 1RB20 | 1RB0 | 0.2754 | 30 |
| 27 | 1RB30 | 1RB0 | 0.2007 | 30 |
| 28 | 1RB40 | 1RB0 | 0.1260 | 30 |
| 29 | 1RB50 | 1RB0 | 0.0513 | 30 |
| 20MHz + 40MHz | 30 | 1RB0 | - |  | 30 |
| 31 | 1RB50 | - |  | 30 |
| 32 | 1RB0 | 1RB0 | 0.3509 | 30 |
| 33 | 1RB0 | 1RB10 | 0.4127 | 30 |
| 34 | 1RB0 | 1RB20 | 0.4745 | 30 |
| 35 | 1RB0 | 1RB30 | 0.5363 | 30 |
| 36 | 1RB0 | 1RB40 | 0.5981 | 30 |
| 37 | 1RB0 | 1RB50 | 0.6600 | 30 |
| 38 | 1RB0 | 1RB60 | 0.7218 | 30 |
| 39 | 1RB0 | 1RB70 | 0.7836 | 30 |
| 40 | 1RB0 | 1RB80 | 0.8454 | 30 |
| 41 | 1RB0 | 1RB90 | 0.9073 | 30 |
| 42 | 1RB0 | 1RB100 | 0.9691 | 30 |
| 43 | 1RB0 | 1RB105 | 1.0 | 30 |
| 44 | 1RB10 | 1RB0 | 0.2890 | 30 |
| 45 | 1RB20 | 1RB0 | 0.2272 | 30 |
| 46 | 1RB30 | 1RB0 | 0.1654 | 30 |
| 47 | 1RB40 | 1RB0 | 0.1036 | 30 |
| 48 | 1RB50 | 1RB0 | 0.0417 | 30 |
| 30MHz + 40MHz | 49 | 1RB0 | - |  | 30 |
| 50 | 1RB77 | - |  | 30 |
| 51 | 1RB0 | 1RB0 | 0.4449 | 30 |
| 52 | 1RB0 | 1RB10 | 0.4977 | 30 |
| 53 | 1RB0 | 1RB20 | 0.5506 | 30 |
| 54 | 1RB0 | 1RB30 | 0.6035 | 30 |
| 55 | 1RB0 | 1RB40 | 0.6563 | 30 |
| 56 | 1RB0 | 1RB50 | 0.7092 | 30 |
| 57 | 1RB0 | 1RB60 | 0.7621 | 30 |
| 58 | 1RB0 | 1RB70 | 0.8150 | 30 |
| 59 | 1RB0 | 1RB80 | 0.8678 | 30 |
| 60 | 1RB0 | 1RB90 | 0.9207 | 30 |
| 61 | 1RB0 | 1RB100 | 0.9736 | 30 |
| 62 | 1RB0 | 1RB105 | 1.0000 | 30 |
| 63 | 1RB10 | 1RB0 | 0.3920 | 30 |
| 64 | 1RB20 | 1RB0 | 0.3391 | 30 |
| 65 | 1RB30 | 1RB0 | 0.2862 | 30 |
| 66 | 1RB40 | 1RB0 | 0.2334 | 30 |
| 67 | 1RB50 | 1RB0 | 0.1805 | 30 |
| 68 | 1RB60 | 1RB0 | 0.1276 | 30 |
| 69 | 1RB70 | 1RB0 | 0.0748 | 30 |
| 70 | 1RB77 | 1RB0 | 0.0377 | 30 |
| 20MHz + 20MHz | 71 | 1RB0 | - |  | 30 |
| 72 | 1RB51 | - |  | 30 |
| 73 | 1RB0 | 1RB0 | 0.5304 | 30 |
| 74 | 1RB0 | 1RB10 | 0.6243 | 30 |
| 75 | 1RB0 | 1RB20 | 0.7182 | 30 |
| 76 | 1RB0 | 1RB30 | 0.8122 | 30 |
| 77 | 1RB0 | 1RB40 | 0.9061 | 30 |
| 78 | 1RB0 | 1RB50 | 1.0 | 30 |
| 79 | 1RB10 | 1RB0 | 0.4365 | 30 |
| 80 | 1RB20 | 1RB0 | 0.3426 | 30 |
| 81 | 1RB30 | 1RB0 | 0.2486 | 30 |
| 82 | 1RB40 | 1RB0 | 0.1547 | 30 |
| 83 | 1RB50 | 1RB0 | 0.0608 | 30 |
| 10MHz + 30MHz | 84 | 1RB0 | - |  | 30 |
| 85 | 1RB23 | - |  | 30 |
| 86 | 1RB0 | 1RB0 | 0.2768 | 30 |
| 87 | 1RB0 | 1RB10 | 0.3707 | 30 |
| 88 | 1RB0 | 1RB20 | 0.4646 | 30 |
| 89 | 1RB0 | 1RB30 | 0.5586 | 30 |
| 90 | 1RB0 | 1RB40 | 0.6525 | 30 |
| 91 | 1RB0 | 1RB50 | 0.7464 | 30 |
| 92 | 1RB0 | 1RB60 | 0.8403 | 30 |
| 93 | 1RB0 | 1RB70 | 0.9343 | 30 |
| 94 | 1RB0 | 1RB77 | 1.0 | 30 |
| 95 | 1RB10 | 1RB0 | 0.1829 | 30 |
| 96 | 1RB20 | 1RB0 | 0.0890 | 30 |
| 97 | 1RB23 | 1RB0 | 0.0608 | 30 |

Here, R is the ratio of the gap bandwidth between the two PSFCH transmitted on the two intra-band carrier by the total bandwidth of the two carrier.

< Simulation results for PSFCH >

Table 6.1.2.2.1-3, Table 6.1.2.2.1-4, and Table 6.1.2.2.1-5 show the MPR simulation results for the SL contiguous CA scenarios with architecture #1-1, #1-2, and #2-1 in Table 6.1.2.1.1-1 respectively.

Table 6.1.2.2.1-3: PSFCH MPR simulation results for SL contiguous CA with 1x26dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #12 | #13 |  |  |  |  |  |
| R | - | - | 0.53 | 0.62 | 0.71 | 0.80 | 0.90 | 1.00 | 0.43 | 0.34 | 0.25 | 0.15 | 0.05 |  |  |  |  |  |
|  | 2.68 | 0.00 | 5.92 | 7.38 | 10.68 | 10.68 | 9.75 | 9.77 | 1.65 | 1.26 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '20MHz+30MHz' | Scenario # | #14 | #15 | #16 | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 |  |  |
| R | - | - | 0.42 | 0.50 | 0.57 | 0.65 | 0.72 | 0.80 | 0.87 | 0.95 | 1.00 | 0.35 | 0.28 | 0.20 | 0.13 | 0.05 |  |  |
|  | 3.06 | 0.00 | 5.87 | 5.38 | 7.33 | 10.16 | 10.62 | 10.16 | 9.70 | 9.23 | 10.17 | 1.65 | 0.90 | 0.00 | 0.00 | 0.00 |  |  |
| '20MHz+40MHz' | Scenario # | #30 | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 |  |  |  |  |  |  |  |  |
| R | - | - | 0.35 | 0.41 | 0.47 | 0.54 | 0.60 | 0.66 | 0.72 | 0.78 |  |  |  |  |  |  |  |  |
|  | 4.58 | 0.00 | 1.32 | 5.88 | 5.39 | 6.86 | 10.18 | 10.18 | 9.71 | 9.24 |  |  |  |  |  |  |  |  |
| Scenario # | #40 | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |  |  |  |  |  |  |  |  |  |
| R | 0.85 | 0.91 | 0.97 | 1.00 | 0.29 | 0.23 | 0.17 | 0.10 | 0.04 |  |  |  |  |  |  |  |  |  |
|  | 10.18 | 10.18 | 10.18 | 10.19 | 1.65 | 1.26 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |  |  |  |
| '30MHz+40MHz' | Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 | #57 | #58 | #59 |  |  |  |  |  |
| R | - | - | 0.44 | 0.50 | 0.55 | 0.60 | 0.66 | 0.71 | 0.76 | 0.82 | 0.87 |  |  |  |  |  |
|  | 4.66 | 0.00 | 4.94 | 5.92 | 5.43 | 10.68 | 10.21 | 9.28 | 10.22 | 10.22 | 10.67 |  |  |  |  |  |
| Scenario # | #60 | #61 | #62 | #63 | #64 | #65 | #66 | #67 | #68 | #69 | #70 |  |  |  |  |  |
| R | 0.92 | 0.97 | 1.00 | 0.39 | 0.34 | 0.29 | 0.23 | 0.18 | 0.13 | 0.07 | 0.04 |  |  |  |  |  |
|  | 10.21 | 9.75 | 10.70 | 1.65 | 1.65 | 1.26 | 1.26 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '20MHz+20MHz' | Scenario # | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 | #81 | #82 | #83 |  |  |  |  |  |
| R | - | - | 0.53 | 0.62 | 0.72 | 0.81 | 0.91 | 1.00 | 0.44 | 0.34 | 0.25 | 0.15 | 0.06 |  |  |  |  |  |
|  | 4.16 | 0.00 | 5.92 | 10.22 | 10.22 | 10.22 | 10.22 | 9.77 | 2.07 | 1.26 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '10MHz+30MHz' | Scenario # | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 | #97 |  |  |  |  |
| R | - | - | 0.28 | 0.37 | 0.46 | 0.56 | 0.65 | 0.75 | 0.84 | 0.93 | 1.00 | 0.18 | 0.09 | 0.06 |  |  |  |  |
|  | 4.16 | 0.00 | 1.75 | 1.75 | 4.95 | 7.38 | 9.75 | 10.22 | 10.22 | 9.75 | 9.77 | 1.26 | 0.00 | 0.00 |  |  |  |  |

Table 6.1.2.2.1-4: PSFCH MPR simulation results for SL contiguous CA with 2x23dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #12 | #13 |  |  |  |  |  |
| R | - | - | 0.53 | 0.62 | 0.71 | 0.80 | 0.90 | 1.00 | 0.43 | 0.34 | 0.25 | 0.15 | 0.05 |  |  |  |  |  |
|  | 3.80 | 0.00 | 7.05 | 8.50 | 11.79 | 11.80 | 10.87 | 10.89 | 3.61 | 2.36 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '20MHz+30MHz' | Scenario # | #14 | #15 | #16 | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 |  |  |
| R | - | - | 0.42 | 0.50 | 0.57 | 0.65 | 0.72 | 0.80 | 0.87 | 0.95 | 1.00 | 0.35 | 0.28 | 0.20 | 0.13 | 0.05 |  |  |
|  | 4.19 | 0.00 | 6.99 | 6.50 | 8.45 | 11.28 | 11.74 | 11.28 | 10.82 | 10.35 | 11.29 | 2.76 | 2.36 | 0.00 | 0.00 | 0.00 |  |  |
| '20MHz+40MHz' | Scenario # | #30 | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 |  |  |  |  |  |  |  |  |
| R | - | - | 0.35 | 0.41 | 0.47 | 0.54 | 0.60 | 0.66 | 0.72 | 0.78 |  |  |  |  |  |  |  |  |
|  | 5.71 | 0.00 | 2.42 | 7.01 | 6.52 | 7.98 | 11.29 | 11.29 | 10.83 | 10.36 |  |  |  |  |  |  |  |  |
| Scenario # | #40 | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |  |  |  |  |  |  |  |  |  |
| R | 0.85 | 0.91 | 0.97 | 1.00 | 0.29 | 0.23 | 0.17 | 0.10 | 0.04 |  |  |  |  |  |  |  |  |  |
|  | 11.29 | 11.29 | 11.30 | 11.31 | 2.76 | 2.36 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |  |  |  |
| '30MHz+40MHz' | Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 | #57 | #58 | #59 |  |  |  |  |  |
| R | - | - | 0.44 | 0.50 | 0.55 | 0.60 | 0.66 | 0.71 | 0.76 | 0.82 | 0.87 |  |  |  |  |  |
|  | 6.28 | 0.00 | 6.07 | 7.05 | 7.05 | 11.79 | 11.33 | 10.40 | 11.33 | 11.33 | 11.79 |  |  |  |  |  |
| Scenario # | #60 | #61 | #62 | #63 | #64 | #65 | #66 | #67 | #68 | #69 | #70 |  |  |  |  |  |
| R | 0.92 | 0.97 | 1.00 | 0.39 | 0.34 | 0.29 | 0.23 | 0.18 | 0.13 | 0.07 | 0.04 |  |  |  |  |  |
|  | 11.33 | 10.87 | 11.81 | 2.76 | 2.76 | 2.36 | 2.36 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '20MHz+20MHz' | Scenario # | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 | #81 | #82 | #83 |  |  |  |  |  |
| R | - | - | 0.53 | 0.62 | 0.72 | 0.81 | 0.91 | 1.00 | 0.44 | 0.34 | 0.25 | 0.15 | 0.06 |  |  |  |  |  |
|  | 5.29 | 0.00 | 7.05 | 11.33 | 10.87 | 11.33 | 11.33 | 10.89 | 3.17 | 2.36 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '10MHz+30MHz' | Scenario # | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 | #97 |  |  |  |  |
| R | - | - | 0.28 | 0.37 | 0.46 | 0.56 | 0.65 | 0.75 | 0.84 | 0.93 | 1.00 | 0.18 | 0.09 | 0.06 |  |  |  |  |
|  | 5.29 | 0.00 | 2.86 | 2.86 | 6.07 | 8.51 | 10.87 | 11.33 | 11.33 | 10.87 | 10.89 | 2.36 | 0.00 | 0.00 |  |  |  |  |

Table 6.1.2.2.1-5: PSFCH MPR simulation results for SL contiguous CA with 2x23dBm+2LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #12 | #13 |  |  |  |  |  |
| R | - | - | 0.53 | 0.62 | 0.71 | 0.80 | 0.90 | 1.00 | 0.43 | 0.34 | 0.25 | 0.15 | 0.05 |  |  |  |  |  |
|  | 1.31 | 1.27 | 0.81 | 1.66 | 3.14 | 3.61 | 2.62 | 2.65 | 1.15 | 0.77 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '20MHz+30MHz' | Scenario # | #14 | #15 | #16 | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 |  |  |
| R | - | - | 0.42 | 0.50 | 0.57 | 0.65 | 0.72 | 0.80 | 0.87 | 0.95 | 1.00 | 0.35 | 0.28 | 0.20 | 0.13 | 0.05 |  |  |
|  | 1.77 | 1.75 | 1.27 | 0.84 | 1.32 | 2.70 | 3.11 | 2.73 | 2.66 | 2.70 | 2.68 | 1.15 | 0.36 | 0.00 | 0.00 | 0.00 |  |  |
| '20MHz+40MHz' | Scenario # | #30 | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 |  |  |  |  |  |  |  |  |
| R | - | - | 0.35 | 0.41 | 0.47 | 0.54 | 0.60 | 0.66 | 0.72 | 0.78 |  |  |  |  |  |  |  |  |
|  | 1.78 | 1.75 | 1.73 | 1.69 | 1.78 | 1.73 | 3.12 | 2.73 | 2.69 | 2.63 |  |  |  |  |  |  |  |  |
| Scenario # | #40 | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |  |  |  |  |  |  |  |  |  |
| R | 0.85 | 0.91 | 0.97 | 1.00 | 0.29 | 0.23 | 0.17 | 0.10 | 0.04 |  |  |  |  |  |  |  |  |  |
|  | 2.72 | 3.15 | 2.71 | 2.71 | 1.17 | 0.78 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |  |  |  |
| '30MHz+40MHz' | Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 | #57 | #58 | #59 |  |  |  |  |  |
| R | - | - | 0.44 | 0.50 | 0.55 | 0.60 | 0.66 | 0.71 | 0.76 | 0.82 | 0.87 |  |  |  |  |  |
|  | 1.75 | 1.69 | 1.25 | 1.21 | 1.30 | 3.11 | 2.60 | 2.21 | 2.65 | 3.07 | 2.68 |  |  |  |  |  |
| Scenario # | #60 | #61 | #62 | #63 | #64 | #65 | #66 | #67 | #68 | #69 | #70 |  |  |  |  |  |
| R | 0.92 | 0.97 | 1.00 | 0.39 | 0.34 | 0.29 | 0.23 | 0.18 | 0.13 | 0.07 | 0.04 |  |  |  |  |  |
|  | 2.63 | 2.67 | 3.15 | 1.17 | 0.79 | 0.78 | 0.73 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '20MHz+20MHz' | Scenario # | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 | #81 | #82 | #83 |  |  |  |  |  |
| R | - | - | 0.53 | 0.62 | 0.72 | 0.81 | 0.91 | 1.00 | 0.44 | 0.34 | 0.25 | 0.15 | 0.06 |  |  |  |  |  |
|  | 1.80 | 1.74 | 1.30 | 3.13 | 2.69 | 3.17 | 3.13 | 2.71 | 1.18 | 0.39 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |
| '10MHz+30MHz' | Scenario # | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 | #97 |  |  |  |  |
| R | - | - | 0.28 | 0.37 | 0.46 | 0.56 | 0.65 | 0.75 | 0.84 | 0.93 | 1.00 | 0.18 | 0.09 | 0.06 |  |  |  |  |
|  | 1.73 | 1.32 | 0.80 | 1.23 | 0.84 | 1.27 | 2.59 | 2.69 | 2.62 | 2.66 | 2.64 | 0.78 | 0.00 | 0.00 |  |  |  |  |

Table 6.1.2.2.1-6 shows the maximum value of simulation results for SL Contiguous CA with architecture #1-1, #1-2, and #2-1 respectively

Table 6.1.2.2.1-6: PSFCH MPR simulation results for SL contiguous CA

|  |  |  |  |
| --- | --- | --- | --- |
|  | MPR for ratio (R) in bandwidth class B(dB) | | |
| R ≤ 0. 3 | 0.3 < R ≤ 0. 5 | 0.5 < R ≤ 1.0 |
| 1x26dBm+1LO | 1.8 | 6.9 | 10.7 |
| 2x23dBm+1LO | 2.9 | 8.0 | 11.8 |
| 2x23dBm+2LO | 0.8 | 1.8 | 3.6 |

The MPR can be proposed as Table 6.1.2.2.1-7 based on the simulation results when considering implementation margin.

Table 6.1.2.2.1-7: PSFCH MPR for SL contiguous CA

|  |  |  |  |
| --- | --- | --- | --- |
|  | MPR for ratio (R) in bandwidth class B(dB) | | |
| R ≤ 0. 3 | 0.3 < R ≤ 0. 5 | 0.5 < R ≤ 1.0 |
| 1x26dBm+1LO | ≤ 5.0 | ≤ 10.0 | ≤ 14.0 |
| 2x23dBm+1LO | ≤ 6.0 | ≤ 11.0 | ≤ 15.0 |
| 2x23dBm+2LO | ≤ 4.0 | ≤ 5.0 | ≤ 7.0 |

#### 6.1.2.3 MPR for S-SSB transmission

##### 6.1.2.3.1 Simulation results from LG Electronics (R4-2415894)

< UE RF architecture >

Architecture #1-1, #1-2, and #2-1 in Table 6.1.2.1.1-1 are considered for MPR evaluation.

< Simulation assumption >

The simulation assumption in Table 6.1.2.3.1-1 is considered.

Table 6.1.2.3.1-1. Simulation assumption

|  |  |
| --- | --- |
| Center frequency | 5.9GHz |
| Bandwidth | per CC: 10/20/30/40MHz  aggregated CBW: 10+10, 10+30, 20+20, 20+30, 20+40, 30+30 (MHz) |
| Maximum output power for aggregated CBW | 26dBm |
| Modulation for PSBCH | QPSK |
| S-PSS | M-sequence |
| S-SSS | Golden-sequence |
| S-SSB structure | 직사각형이(가) 표시된 사진  자동 생성된 설명 |
| RB allocation | RBstart: All the possible cases  LCRB: 11 RB |
| Structure of Slot | Baseline is to follow RAN1 agreements |
| Waveform | CP-OFDM |
| ACLR | 31dBc |
| Carrier leakage | 25dBc |
| IQ image | 34dBc |
| CIM3 | 60dBc |
| PA calibration | PA calibrated to deliver 30dBc ACLR for a fully allocated RBs in 20MHz QPSK DFT- S-OFDM waveform at 1 dB MPR.  This is based to share PA between LTE V2X and NR V2X at 5.9GHz as worst case. |

< Evaluation scenario >

The S-SSB MPR evaluation scenarios in Table 6.1.2.3.1-2 are considered for SL contiguous CA.

Table 6.1.2.3.1-2: SL contiguous CA MPR evaluation scenarios for S-SSB

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Aggregated CBW | Scenario | CC1 | CC2 | Inner/Outer1/Outer2 RB allocation | SCS |
| 10MHz + 10MHz | 1 | 11RB0 | 11RB41 | Outer2 | 15 |
| 2 | 11RB18 | 11RB22 | Outer2 | 15 |
| 3 | 11RB20 | 11RB22 | Outer1 | 15 |
| 4 | 11RB33 | 11RB17 | Outer1 | 15 |
| 5 | 11RB35 | 11RB7 | Inner | 15 |
| 6 | 11RB41 | 11RB0 | Inner | 15 |
| 20MHz + 30MHz | 7 | 11RB0 | 11RB67 | Outer2 | 30 |
| 8 | 11RB15 | 11RB32 | Outer2 | 30 |
| 9 | 11RB15 | 11RB30 | Outer1 | 30 |
| 10 | 11RB33 | 11RB7 | Outer1 | 30 |
| 11 | 11RB34 | 11RB7 | Inner | 30 |
| 12 | 11RB40 | 11RB0 | Inner | 30 |
| 20MHz + 40MHz | 13 | 11RB0 | 11RB95 | Outer2 | 30 |
| 14 | 11RB4 | 11RB30 | Outer2 | 30 |
| 15 | 11RB15 | 11RB30 | Outer1 | 30 |
| 16 | 11RB33 | 11RB7 | Outer1 | 30 |
| 17 | 11RB34 | 11RB7 | Inner | 30 |
| 18 | 11RB40 | 11RB0 | Inner | 30 |
| 30MHz + 40MHz | 19 | 11RB0 | 11RB95 | Outer2 | 30 |
| 20 | 11RB4 | 11RB30 | Outer2 | 30 |
| 21 | 11RB15 | 11RB30 | Outer1 | 30 |
| 22 | 11RB47 | 11RB7 | Outer1 | 30 |
| 23 | 11RB48 | 11RB7 | Inner | 30 |
| 24 | 11RB67 | 11RB0 | Inner | 30 |
| 20MHz + 20MHz | 25 | 11RB0 | 11RB40 | Outer2 | 30 |
| 26 | 11RB4 | 11RB30 | Outer2 | 30 |
| 27 | 11RB28 | 11RB7 | Outer1 | 30 |
| 28 | 11RB33 | 11RB7 | Outer1 | 30 |
| 29 | 11RB34 | 11RB0 | Inner | 30 |
| 30 | 11RB40 | 11RB0 | Inner | 30 |
| 10MHz + 30MHz | 31 | 11RB0 | 11RB67 | Outer2 | 30 |
| 32 | 11RB7 | 11RB32 | Outer2 | 30 |
| 33 | 11RB7 | 11RB31 | Outer1 | 30 |
| 34 | 11RB13 | 11RB1 | Outer1 | 30 |
| 35 | 11RB13 | 11RB0 | Inner | 30 |

< Simulation results for S-SSB >

Table 6.1.2.3.1-3, Table 6.1.2.3.1-4, and Table 6.1.2.3.1-5 show the MPR simulation results for the SL contiguous CA scenarios with architecture #1-1, #1-2, and #2-1 in Table 6.1.2.1.1-1 respectively.

Table 6.1.2.3.1-3: S-SSB MPR simulation results for SL Contiguous CA with 1x26dBm + 1LO

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 |
|  | 9.7 | 5.4 | 5.5 | 0.8 | 0.8 | 0.3 |
| '20MHz+30MHz' | Scenario # | #7 | #8 | #9 | #10 | #11 | #12 |
|  | 6.9 | 4.6 | 5.0 | 0.7 | 0.8 | 0.3 |
| '20MHz+40MHz' | Scenario # | #13 | #14 | #15 | #16 | #17 | #18 |
|  | 6.9 | 5.1 | 4.5 | 0.7 | 0.8 | 0.2 |
| '30MHz+40MHz' | Scenario # | #19 | #20 | #21 | #22 | #23 | #24 |
|  | 6.9 | 6.0 | 4.6 | 0.8 | 0.7 | 0.2 |
| '20MHz+20MHz' | Scenario # | #25 | #26 | #27 | #28 | #29 | #30 |
|  | 6.9 | 6.9 | 4.6 | 0.7 | 0.8 | 0.3 |
| '10MHz+30MHz' | Scenario # | #31 | #32 | #33 | #34 | #35 |  |
|  | 6.9 | 4.6 | 4.6 | 1.1 | 1.0 |  |

Table 6.1.2.3.1-4: S-SSB MPR simulation results for SL Contiguous CA with 2x23dBm + 1LO

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 |
|  | 10.1 | 5.8 | 5.8 | 1.1 | 1.1 | 0.2 |
| '20MHz+30MHz' | Scenario # | #7 | #8 | #9 | #10 | #11 | #12 |
|  | 7.7 | 5.3 | 5.3 | 1.1 | 1.1 | 0.1 |
| '20MHz+40MHz' | Scenario # | #13 | #14 | #15 | #16 | #17 | #18 |
|  | 7.2 | 4.9 | 5.3 | 1.0 | 1.1 | 0.2 |
| '30MHz+40MHz' | Scenario # | #19 | #20 | #21 | #22 | #23 | #24 |
|  | 7.6 | 6.2 | 5.4 | 1.4 | 1.1 | 0.2 |
| '20MHz+20MHz' | Scenario # | #25 | #26 | #27 | #28 | #29 | #30 |
|  | 7.2 | 7.2 | 4.9 | 1.1 | 1.1 | 0.2 |
| '10MHz+30MHz' | Scenario # | #31 | #32 | #33 | #34 | #35 |  |
|  | 7.7 | 4.9 | 5.3 | 1.6 | 1.3 |  |

Table 6.1.2.3.1-5: S-SSB MPR simulation results for SL Contiguous CA with 2x23dBm + 2LO

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 |
|  | 2.7 | 2.7 | 2.8 | 0.0 | 0.0 | 0.0 |
| '20MHz+30MHz' | Scenario # | #7 | #8 | #9 | #10 | #11 | #12 |
|  | 2.7 | 1.9 | 2.4 | 0.0 | 0.0 | 0.0 |
| '20MHz+40MHz' | Scenario # | #13 | #14 | #15 | #16 | #17 | #18 |
|  | 2.8 | 1.9 | 1.9 | 0.0 | 0.0 | 0.0 |
| '30MHz+40MHz' | Scenario # | #19 | #20 | #21 | #22 | #23 | #24 |
|  | 2.3 | 1.9 | 1.8 | 0.0 | 0.0 | 0.0 |
| '20MHz+20MHz' | Scenario # | #25 | #26 | #27 | #28 | #29 | #30 |
|  | 2.0 | 2.4 | 2.0 | 0.0 | 0.0 | 0.0 |
| '10MHz+30MHz' | Scenario # | #31 | #32 | #33 | #34 | #35 |  |
|  | 2.4 | 1.9 | 1.9 | 0.0 | 0.0 |  |

Table 6.1.2.3.1-6 shows the maximum value of simulation results for architecture #1-1, #1-2, and #2-1 respectively considering Inner, Outer1, and Outer 2 RB allocation ranges.

Table 6.1.2.3.1-6 : S-SSB MPR simulation results for SL Contiguous CA

|  |  |  |  |
| --- | --- | --- | --- |
|  | MPR for bandwidth class B(dB) | | |
|  | Inner | Outer1 | Outer2 |
| 1x26dBm + 1LO | 1.0 | 5.5 | 9.7 |
| 2x23dBm + 1LO | 1.3 | 5.8 | 10.1 |
| 2x23dBm + 2LO | 0.0 | 2.8 | 2.8 |

The MPR can be proposed as Table 6.1.2.3.1-7 based on the simulation results when considering implementation margin.

Table 6.1.2.3.1-7: S-SSB MPR for SL contiguous CA

|  |  |  |  |
| --- | --- | --- | --- |
|  | MPR for bandwidth class B(dB) | | |
|  | Inner | Outer1 | Outer2 |
| **1x26dBm + 1LO** | ≤ 4.0 | ≤ 9.5 | ≤ 14.0 |
| **2x23dBm + 1LO** | ≤ 4.5 | ≤ 10.0 | ≤ 14.5 |
| **2x23dBm + 2LO** | ≤ 3.0 | ≤ 7.0 | ≤ 7.0 |

### 6.1.3 UE additional maximum output power reduction

### 6.1.4 Configured transmitted power

## 6.2 Tx requirements for SL intra-band non-contiguous CA

### 6.2.1 Maximum output power

For the intra-band non-contiguous SL CA operation with two uplink carriers, both PC3 and PC2 NR SL CA UE power classes will be supported for the maximum output power for any transmission bandwidth within the channel bandwidth. The period of measurement shall be at least one sub frame (1ms).

Table 6.2.1-1: NR intra-band non-contiguous SL CA UE Power Class

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR SL CA band Configuration | Class 1 (dBm) | Tolerance (dB) | Class 2 (dBm) | Tolerance (dB) | Class 3 (dBm) | Tolerance (dB) | Class 4 (dBm) | Tolerance (dB) |
| SL\_n47(2A) |  |  | 26 | +2/-33 | 23 | +2/-33 |  |  |
| NOTE 1: PPowerClass is the maximum UE power specified without taking into account the tolerance  NOTE 2: For intra-band SL CA UE, the maximum power requirement apply to the total transmitted power over all component carriers (per UE).  NOTE 3: 3 refers to the transmission bandwidths (Figure 5.6-1 in TS38.101-1) confined within FUL\_low and FUL\_low + 4 MHz or FUL\_high – 4 MHz and FUL\_high, the maximum output power requirement is relaxed by reducing the lower tolerance limit by 1.5 dB.  NOTE 4: Power class 3 is the default power class unless otherwise stated. | | | | | | | | |

### 6.2.2 UE maximum output power reduction

For the basic parameters, RAN4 reuse the simulation assumptions in TR38.785 (Rel-17 enhanced NR sidelink) for NR intra-band non-contiguous CA UE. Other constraints of PSCCH/PSSCH/PSFCH/S-SSB for the intra-band non-contiguous SL CA operation can be assumed based on current RAN1’s agreement. Aslo, the following parameters are considered to evalute MPR/A-MPR requirements.

Table 6.2.2-1: Basic RF parameters for PC2/PC3 NR intra-band non-contiguous SL CA UE

|  |  |
| --- | --- |
| Center frequency | 5.9GHz |
| Bandwidth | per CC: 10/20MHz  aggregated CBW: 10+10MHz/ 10+20MHz |
| Maximum output power for aggregated CBW | 23dBm/26dBm |
| Numerology | 15 kHz/30kHz/60kHz |
| Modulation per CC | QPSK/16QAM/64QAM/256QAM |
| Waveform | CP-OFDM |
| ACLR | 30dBc(PC3) / 31dBc(PC2) |
| Carrier leakage | 25dBc |
| IQ image | 34dBc |
| CIM3 | 60dBc |
| PA calibration | PA calibrated to deliver 30dB ACLR for a fully allocated RBs in 20MHz QPSK DFT- S-OFDM waveform at 1 dB MPR.  This is based to share PA between LTE V2X and NR V2X at 5.9GHz as worst case. |
| Frequency Gap | Consider the worst case for BW gap size between sub-block #1 and #2 for the MPR requirement. To derive MPR requirements, consider all candidate gap size. |

#### 6.2.2.1 MPR for PSSCH/PSCCH transmission

For PC3 SL intra-band non-contiguous CA of PSCCH and PSSCH simultaneous transmission, specify MPR in Table 6.2.2.1-1, Table 6.2.2.1-2 and Table 6.1.2.1-3 for 1x23dBm + 1LO, 2x20dBm + 1LO and 2x20dBm + 2LO, respectively.

Table 6.2.2.1-1. PSSCH/PSCCH MPR for SL non-contiguous CA with 1x23dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ [10.0] | ≤ 16.5 |
| 5.04 ≤ B < 10.08 | ≤ [9.0] | ≤ 15,5 |
| 10.08 ≤ B |  | ≤ 15.0 |

Table 6.2.2.1-2. PSSCH/PSCCH MPR for SL non-contiguous CA with 2x20dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ [10.5] | ≤ 17.0 |
| 5.04 ≤ B < 10.08 | ≤[ 9.5] | ≤ 16.0 |
| 10.08 ≤ B |  | ≤ 15.5 |

Table 6.2.2.1-3. PSSCH/PSCCH MPR for SL non-contiguous CA with 2x20dBm PA + 2LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ [6.5] | ≤ 13.5 |
| 5.04 ≤ B < 10.08 | ≤ [6.5] | ≤ 12.5 |
| 10.08 ≤ B < 20.16 |  | ≤ 11.5 |
| 20.16 ≤ B |  | ≤ 10.5 |

For PC2 SL intra-band non-contiguous CA of PSCCH and PSSCH simultaneous transmission, specify MPR in Table 6.2.2.1-4, Table 6.2.2.1-5 and Table 6.1.2.1-6 for 1x26dBm + 1LO, 2x23dBm + 1LO and 2x23dBm + 2LO, respectively.

Table 6.2.2.1-4. PSSCH/PSCCH MPR for SL non-contiguous CA with 1x26dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ [11.0] | ≤ 18.5 |
| 5.04 ≤ B < 10.08 | ≤ [10.0] | ≤ 17.0 |
| 10.08 ≤ B |  | ≤ 16.0 |

Table 6.2.2.1-5. PSSCH/PSCCH MPR for SL non-contiguous CA with 2x23dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ [11.5] | ≤ 19.0 |
| 5.04 ≤ B < 10.08 | ≤ [11.0] | ≤ 17.5 |
| 10.08 ≤ B |  | ≤ 16.5 |

Table 6.2.2.1-6. PSSCH/PSCCH MPR for SL non-contiguous CA with 2x23dBm PA + 2LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ [7.0] | ≤ 15.0 |
| 5.04 ≤ B < 10.08 |  | ≤ 13.0 |
| 10.08 ≤ B < 20.16 |  | ≤ 12.0 |
| 20.16 ≤ B |  | ≤ 10.0 |

##### 6.2.2.1.1 Simulation results from LG Electronics (R4-2416066)

* PC2 MPR

<UE RF architecture>

UE RF architecture in Table 6.2.2.1.1-1 is considered for MPR evaluation.

Table 6.2.2.1.1-1. UE Architecture for PC2 SL non-contiguous CA

|  |  |  |
| --- | --- | --- |
| Arch | description | Remarks |
| #1-1 | 1x26dBm PA+ 1LO | Single–Tx |
| #1-2 | 2x23dBm PA+ 1LO | dual-Tx or txDiversity |
| #2-2 | 2x23dBm PA+ 2LO | dualPA-Architecture |

< Simulation assumption >

The simulation assumption in Table 6.2.2.1.1-2 is considered.

Table 6.2.2.1.1-2. Simulation assumption

|  |  |
| --- | --- |
| Center frequency | 5.9GHz |
| Bandwidth | per CC: 10MHz/20MHz  aggregated CBW: 10MHz +10 MHz/  10MHz+20MHz |
| Aggregated CBW | 10MHz + Gap10MHz + 10MHz  10MHz + Gap50MHz + 10MHz  10MHz + Gap10MHz + 20MHz  10MHz + Gap40MHz + 20MHz |
| Maximum output power for aggregated CBW | 26dBm |
| Numerology | 15 kHz |
| Modulation per CC | QPSK/16QAM/64QAM/256QAM |
| Waveform | CP-OFDM |
| ACLR | 31dBc |
| Carrier leakage | 25dBc |
| IQ image | 34dBc |
| CIM3 | 60dBc |
| PA calibration | PA calibrated to deliver 30dBc ACLR for a fully allocated RBs in 20MHz QPSK DFT- S-OFDM waveform at 1 dB MPR.  This is based to share PA between LTE V2X and NR V2X at 5.9GHz as worst case. |

< Evaluation scenario >

The MPR evaluation scenario in Table 6.2.2.1.1-3 is considered.

Table 6.2.2.1.1-3: PSSCH SL intra-band NC CA MPR evaluation scenarios

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Aggregated CBW | Scenario | CC1 | CC2 | B | Frequency of FIM3,low\_block,low & FIM3,high\_block,high | SCS1 (= SCS2) |
| 10MHz + Gap10MHz+10MHz | 1 | 10RB0 | 10RB42 | 3.6 | SEfreq\_-30 | 15 |
| 2 | 10RB34 | 10RB8 | 3.6 | SEMfreq\_-13 | 15 |
| 3 | 12RB0 | 12RB40 | 4.32 | SEfreq\_-30 | 15 |
| 4 | 12RB33 | 12RB7 | 4.32 | SEMfreq\_-13 | 15 |
| 5 | 15RB0 | 15RB37 | 5.4 | SEfreq\_-30 | 15 |
| 6 | 15RB31 | 15RB5 | 5.4 | SEMfreq\_-13 | 15 |
| 7 | 20RB0 | 20RB32 | 7.2 | SEfreq\_-30 | 15 |
| 8 | 20RB29 | 20RB3 | 7.2 | SEMfreq\_-13 | 15 |
| 9 | 25RB0 | 25RB27 | 9.0 | SEfreq\_-30 | 15 |
| 10 | 25RB26 | 25RB0 | 9.0 | SEMfreq\_-25 | 15 |
| 11 | 30RB0 | 30RB22 | 10.8 | SEfreq\_-30 | 15 |
| 12 | 30RB22 | 30RB0 | 10.8 | SEMfreq\_-25 | 15 |
| 13 | 36RB0 | 36RB16 | 12.96 | SEfreq\_-30 | 15 |
| 14 | 36RB16 | 36RB0 | 12.96 | SEMfreq\_-25 | 15 |
| 15 | 40RB0 | 40RB12 | 14.4 | SEfreq\_-30 | 15 |
| 16 | 40RB12 | 40RB0 | 14.4 | SEfreq\_-30 | 15 |
| 17 | 45RB0 | 45RB7 | 16.2 | SEfreq\_-30 | 15 |
| 18 | 45RB7 | 45RB0 | 16.2 | SEfreq\_-30 | 15 |
| 19 | 50RB0 | 50RB2 | 18.0 | SEfreq\_-30 | 15 |
| 20 | 50RB2 | 50RB0 | 18.0 | SEfreq\_-30 | 15 |
| 10MHz + Gap50MHz+10MHz | 21 | 10RB0 | 10RB42 | 3.6 | SEfreq\_-30 | 15 |
| 22 | 10RB42 | 10RB8 | 3.6 | SEfreq\_-30 | 15 |
| 23 | 12RB0 | 12RB40 | 4.32 | SEfreq\_-30 | 15 |
| 24 | 12RB40 | 12RB0 | 4.32 | SEfreq\_-30 | 15 |
| 25 | 15RB0 | 15RB37 | 5.4 | SEfreq\_-30 | 15 |
| 26 | 15RB37 | 15RB0 | 5.4 | SEfreq\_-30 | 15 |
| 27 | 20RB0 | 20RB32 | 7.2 | SEfreq\_-30 | 15 |
| 28 | 20RB32 | 20RB0 | 7.2 | SEfreq\_-30 | 15 |
| 29 | 25RB0 | 25RB27 | 9.0 | SEfreq\_-30 | 15 |
| 30 | 25RB27 | 25RB0 | 9.0 | SEfreq\_-30 | 15 |
| 31 | 30RB0 | 30RB22 | 10.8 | SEfreq\_-30 | 15 |
| 32 | 30RB22 | 30RB0 | 10.8 | SEfreq\_-30 | 15 |
| 33 | 36RB0 | 36RB16 | 12.96 | SEfreq\_-30 | 15 |
| 34 | 36RB16 | 36RB0 | 12.96 | SEfreq\_-30 | 15 |
| 35 | 40RB0 | 40RB12 | 14.4 | SEfreq\_-30 | 15 |
| 36 | 40RB12 | 40RB0 | 14.4 | SEfreq\_-30 | 15 |
| 37 | 45RB0 | 45RB7 | 16.2 | SEfreq\_-30 | 15 |
| 38 | 45RB7 | 45RB0 | 16.2 | SEfreq\_-30 | 15 |
| 39 | 50RB0 | 50RB2 | 18.0 | SEfreq\_-30 | 15 |
| 40 | 50RB2 | 50RB0 | 18.0 | SEfreq\_-30 | 15 |
| 10MHz + Gap10MHz+20MHz | 41 | 10RB0 | 10RB96 | 3.6 | SEfreq\_-30 | 15 |
| 42 | 10RB42 | 10RB0 | 3.6 | SEfreq\_-13 | 15 |
| 43 | 12RB0 | 12RB94 | 4.32 | SEfreq\_-30 | 15 |
| 44 | 12RB40 | 12RB0 | 4.32 | SEfreq\_-13 | 15 |
| 45 | 15RB0 | 15RB91 | 5.4 | SEfreq\_-30 | 15 |
| 46 | 15RB37 | 15RB0 | 5.4 | SEfreq\_-13 | 15 |
| 47 | 20RB0 | 20RB86 | 7.2 | SEfreq\_-30 | 15 |
| 48 | 20RB32 | 20RB0 | 7.2 | SEfreq\_-13 | 15 |
| 49 | 25RB0 | 25RB81 | 9.0 | SEfreq\_-30 | 15 |
| 50 | 25RB27 | 25RB0 | 9.0 | SEfreq\_-25 | 15 |
| 51 | 30RB0 | 30RB76 | 10.8 | SEfreq\_-30 | 15 |
| 52 | 30RB22 | 30RB0 | 10.8 | SEfreq\_-25 | 15 |
| 53 | 36RB0 | 36RB70 | 12.96 | SEfreq\_-30 | 15 |
| 54 | 36RB16 | 36RB0 | 12.96 | SEfreq\_-25 | 15 |
| 55 | 40RB0 | 40RB66 | 14.4 | SEfreq\_-30 | 15 |
| 56 | 40RB12 | 40RB0 | 14.4 | SEfreq\_-30 | 15 |
| 57 | 45RB0 | 45RB61 | 16.2 | SEfreq\_-30 | 15 |
| 58 | 45RB7 | 45RB0 | 16.2 | SEfreq\_-30 | 15 |
| 59 | 50RB0 | 50RB56 | 18.0 | SEfreq\_-30 | 15 |
| 60 | 50RB2 | 50RB0 | 18.0 | SEfreq\_-30 | 15 |
| 61 | 50RB0 | 70RB36 | 21.6 | SEfreq\_-30 | 15 |
| 62 | 50RB2 | 70RB0 | 21.6 | SEfreq\_-30 | 15 |
| 63 | 50RB0 | 90RB16 | 25.2 | SEfreq\_-30 | 15 |
| 64 | 50RB2 | 90RB0 | 25.2 | SEfreq\_-30 | 15 |
| 65 | 50RB0 | 105RB1 | 27.9 | SEfreq\_-30 | 15 |
| 66 | 50RB2 | 105RB0 | 27.9 | SEfreq\_-30 | 15 |
| 10MHz + Gap40MHz+20MHz | 67 | 10RB0 | 10RB96 | 3.6 | SEfreq\_-30 | 15 |
| 68 | 10RB42 | 10RB0 | 3.6 | SEfreq\_-30 | 15 |
| 69 | 12RB0 | 12RB40 | 4.32 | SEfreq\_-30 | 15 |
| 70 | 12RB40 | 12RB0 | 4.32 | SEfreq\_-30 | 15 |
| 71 | 15RB0 | 15RB91 | 5.4 | SEfreq\_-30 | 15 |
| 72 | 15RB37 | 15RB0 | 5.4 | SEfreq\_-30 | 15 |
| 73 | 20RB0 | 20RB32 | 7.2 | SEfreq\_-30 | 15 |
| 74 | 20RB32 | 20RB0 | 7.2 | SEfreq\_-30 | 15 |
| 75 | 25RB0 | 25RB27 | 9.0 | SEfreq\_-30 | 15 |
| 76 | 25RB27 | 25RB0 | 9.0 | SEfreq\_-30 | 15 |
| 77 | 30RB0 | 30RB22 | 10.8 | SEfreq\_-30 | 15 |
| 78 | 30RB22 | 30RB0 | 10.8 | SEfreq\_-30 | 15 |
| 79 | 36RB0 | 36RB16 | 12.96 | SEfreq\_-30 | 15 |
| 80 | 36RB16 | 36RB0 | 12.96 | SEfreq\_-30 | 15 |
| 81 | 40RB0 | 40RB12 | 14.4 | SEfreq\_-30 | 15 |
| 82 | 40RB12 | 40RB0 | 14.4 | SEfreq\_-30 | 15 |
| 83 | 45RB0 | 45RB7 | 16.2 | SEfreq\_-30 | 15 |
| 84 | 45RB7 | 45RB0 | 16.2 | SEfreq\_-30 | 15 |
| 85 | 50RB0 | 50RB2 | 18.0 | SEfreq\_-30 | 15 |
| 86 | 50RB2 | 50RB0 | 18.0 | SEfreq\_-30 | 15 |
| 87 | 50RB0 | 70RB36 | 21.6 | SEfreq\_-30 | 15 |
| 88 | 50RB2 | 70RB0 | 21.6 | SEfreq\_-30 | 15 |
| 89 | 50RB0 | 90RB16 | 25.2 | SEfreq\_-30 | 15 |
| 90 | 50RB2 | 90RB0 | 25.2 | SEfreq\_-30 | 15 |
| 91 | 50RB0 | 105RB1 | 27.9 | SEfreq\_-30 | 15 |
| 92 | 50RB2 | 105RB0 | 27.9 | SEfreq\_-30 | 15 |

Here, the aggregated CA bandwidth is CA bandwidth class B, which is composed of 2 CCs (CC1 + CC2).

- LCRB1 is for CC1 which is the component carrier with lower frequency

- LCRB2 is for CC2 which is the component carrier with higher frequency

- B = (LCRB1\* 12\* SCS1 + LCRB2 \* 12 \* SCS2)/1,000 (MHz), where SCS1 and SCS2 are expressed in kHz.

- SCS1 is subcarrier spacing for CC1

- SCS2 is subcarrier spacing for CC2

- FIM3,high\_block,high =(2 \* Fhigh\_alloc,high\_edge ) – Flow\_alloc,low\_edge

- FIM3,low\_block,low = (2 \* Flow\_alloc,low\_edge) – Fhigh\_alloc,high\_edge

- Flow\_alloc,low\_edge is the lowermost frequency of the lower transmission bandwidth allocation.

- Flow\_alloc,high\_edge is the uppermost frequency of the lower transmission bandwidth allocation.

- Fhigh\_alloc,low\_edge is the lowermost frequency of the upper transmission bandwidth allocation.

- Fhigh\_alloc,high\_edge is the uppermost frequency of the upper transmission bandwidth allocation.

- SEM-13,low = Threshold frequency where lower spectral emission mask below the lower channel drops from -13 dBm / MHz to -25 dBm / MHz, as specified in Clause 6.5A.2.2.2 of TS38.101-1.

- SEM-13,high = Threshold frequency where upper spectral emission mask above the upper channel drops from -13 dBm / MHz to -25 dBm / MHz, as specified in Clause 6.5A.2.2.2 of TS38.101-1.

- SEMfreq\_-13 = (SEM-13,low < FIM3,low\_block,low ) and(FIM3,high\_block,high < SEM-13,high )

- SEfreq\_-30 = (FIM3,low\_block,low ≤ SEM-25low ) and(SEM-25,high ≤ FIM3,high\_block,high )

Figure 6.2.2.1.1-1, and Figure 6.2.2.1.1-2 show the example of Frequency for FIM3,low\_block,low & FIM3,high\_block,high, such as, SEMfreq\_-13, and SEfreq\_-30 respectively.



Figure 6.2.2.1.1-1: Example of SEMfreq\_-13 for Frequency of FIM3,low\_block,low & FIM3,high\_block,high



Figure 6.2.2.1.1-2: Example of SEMfreq\_-30 for Frequency of FIM3,low\_block,low & FIM3,high\_block,high

< Simulation results >

Table 6.2.2.1.1-4, Table 6.2.2.1.1-5, and Table 6.2.2.1.1-6 show the MPR simulation results for the SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 in Table 6.2.2.1.1-1 respectively.

Table 6.2.2.1.1-4: PSSCH/PSCCH MPR simulation results for SL Non-contiguous CA with 1x26dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+G10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 |  |  |  |  |  |  |  |  |
| 'QPSK' | 16.2 | 7.4 | 15.7 | 6.9 | 14.8 | 6.4 | 13.9 | 6.0 | 13.4 | 5.5 |  |  |  |  |  |  |  |  |
| '16QAM' | 16.2 | 7.4 | 15.7 | 6.9 | 14.8 | 6.4 | 13.9 | 6.0 | 13.4 | 5.5 |  |  |  |  |  |  |  |  |
| '64QAM' | 16.2 | 7.4 | 15.7 | 6.9 | 14.8 | 6.4 | 14.4 | 6.0 | 13.4 | 5.5 |  |  |  |  |  |  |  |  |
| '256QAM' | 16.2 | 7.4 | 15.7 | 6.9 | 15.3 | 6.4 | 13.9 | 6.0 | 13.4 | 5.5 |  |  |  |  |  |  |  |  |
| Scenario # | #11 | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 |  |  |  |  |  |  |  |  |
| 'QPSK' | 13.0 | 7.8 | 12.5 | 8.8 | 12.0 | 10.2 | 11.6 | 11.1 | 11.6 | 11.1 |  |  |  |  |  |  |  |  |
| '16QAM' | 13.0 | 7.4 | 12.5 | 8.8 | 12.1 | 10.2 | 11.6 | 11.1 | 11.1 | 11.1 |  |  |  |  |  |  |  |  |
| '64QAM' | 13.0 | 7.4 | 12.5 | 8.8 | 12.0 | 10.2 | 11.6 | 11.1 | 11.1 | 11.1 |  |  |  |  |  |  |  |  |
| '256QAM' | 13.4 | 7.8 | 13.9 | 8.8 | 13.4 | 13.4 | 13.4 | 13.0 | 13.4 | 13.0 |  |  |  |  |  |  |  |  |
| '10MHz+G50MHz+10MHz' | Scenario # | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 |  |  |  |  |  |  |  |  |
| 'QPSK' | 16.2 | 16.2 | 15.7 | 15.7 | 14.8 | 14.8 | 13.9 | 13.9 | 13.4 | 13.4 |  |  |  |  |  |  |  |  |
| '16QAM' | 16.2 | 16.2 | 15.7 | 15.7 | 14.8 | 14.8 | 13.9 | 13.9 | 13.4 | 13.4 |  |  |  |  |  |  |  |  |
| '64QAM' | 16.2 | 16.2 | 15.7 | 15.7 | 14.8 | 14.8 | 14.4 | 13.9 | 13.4 | 13.4 |  |  |  |  |  |  |  |  |
| '256QAM' | 16.2 | 16.2 | 15.7 | 15.7 | 14.8 | 14.8 | 13.9 | 13.9 | 13.4 | 13.4 |  |  |  |  |  |  |  |  |
| Scenario # | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |  |  |  |  |  |  |  |  |
| 'QPSK' | 13.0 | 13.0 | 12.5 | 12.5 | 12.0 | 12.1 | 11.6 | 11.6 | 11.1 | 11.1 |  |  |  |  |  |  |  |  |
| '16QAM' | 13.0 | 13.0 | 12.5 | 12.5 | 12.1 | 12.1 | 11.6 | 11.6 | 11.1 | 11.6 |  |  |  |  |  |  |  |  |
| '64QAM' | 13.0 | 13.0 | 12.5 | 12.5 | 12.0 | 12.0 | 11.6 | 11.6 | 11.6 | 11.1 |  |  |  |  |  |  |  |  |
| '256QAM' | 13.0 | 13.0 | 13.9 | 13.4 | 13.4 | 13.4 | 13.0 | 13.4 | 13.0 | 13.0 |  |  |  |  |  |  |  |  |
| '10MHz+G10MHz+20MHz' | Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 |  |  |  |  |  |
| 'QPSK' | 16.2 | 7.4 | 15.7 | 6.9 | 14.8 | 6.4 | 14.4 | 6.0 | 13.4 | 5.5 | 13.0 | 7.8 | 12.5 |  |  |  |  |  |
| '16QAM' | 16.7 | 7.4 | 15.7 | 6.9 | 14.8 | 6.4 | 13.9 | 6.0 | 13.4 | 5.5 | 13.0 | 8.3 | 12.5 |  |  |  |  |  |
| '64QAM' | 16.2 | 7.4 | 15.7 | 6.9 | 14.8 | 6.4 | 14.4 | 6.0 | 13.4 | 5.5 | 13.0 | 7.8 | 12.5 |  |  |  |  |  |
| '256QAM' | 16.2 | 7.4 | 15.7 | 6.9 | 14.8 | 6.4 | 13.9 | 6.0 | 13.4 | 5.5 | 13.0 | 7.8 | 14.3 |  |  |  |  |  |
| Scenario # | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 |  |  |  |  |  |
| 'QPSK' | 9.2 | 12.1 | 10.7 | 11.6 | 11.1 | 11.6 | 11.1 | 10.2 | 10.2 | 8.8 | 8.8 | 7.4 | 7.8 |  |  |  |  |  |
| '16QAM' | 9.2 | 12.0 | 10.7 | 11.6 | 11.1 | 11.6 | 11.1 | 10.2 | 10.2 | 8.8 | 8.8 | 7.8 | 7.8 |  |  |  |  |  |
| '64QAM' | 9.2 | 12.0 | 10.7 | 11.6 | 11.1 | 11.1 | 11.1 | 10.2 | 10.2 | 8.8 | 8.8 | 7.8 | 7.8 |  |  |  |  |  |
| '256QAM' | 9.2 | 13.4 | 13.0 | 13.4 | 13.0 | 13.4 | 13.0 | 13.4 | 13.4 | 12.5 | 13.0 | 13.0 | 13.0 |  |  |  |  |  |
| '10MHz+G40MHz+20MHz' | Scenario # | #67 | #68 | #69 | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #70 |  |  |  |  |  |
| 'QPSK' | 16.2 | 16.2 | 15.7 | 15.7 | 14.8 | 14.8 | 13.9 | 14.4 | 13.4 | 13.4 | 13.0 | 13.0 | 12.5 |  |  |  |  |  |
| '16QAM' | 16.2 | 16.2 | 15.7 | 15.7 | 14.8 | 14.8 | 13.9 | 14.4 | 13.4 | 13.4 | 13.0 | 13.0 | 12.5 |  |  |  |  |  |
| '64QAM' | 16.2 | 16.2 | 15.7 | 15.7 | 14.8 | 14.8 | 13.9 | 13.9 | 13.4 | 13.4 | 13.0 | 13.0 | 12.5 |  |  |  |  |  |
| '256QAM' | 16.2 | 16.2 | 15.7 | 15.7 | 14.8 | 14.8 | 13.9 | 14.4 | 13.4 | 13.4 | 13.0 | 13.0 | 13.4 |  |  |  |  |  |
| Scenario # | #80 | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 |  |  |  |  |  |
| 'QPSK' | 12.5 | 12.1 | 12.1 | 11.6 | 11.6 | 11.6 | 11.1 | 11.1 | 11.1 | 10.2 | 10.2 | 9.7 | 9.7 |  |  |  |  |  |
| '16QAM' | 12.5 | 12.1 | 12.1 | 11.6 | 11.6 | 11.6 | 11.1 | 11.1 | 11.1 | 10.2 | 10.2 | 9.7 | 9.7 |  |  |  |  |  |
| '64QAM' | 12.5 | 12.1 | 12.1 | 11.6 | 11.6 | 11.6 | 11.6 | 11.1 | 11.1 | 10.2 | 10.2 | 9.7 | 9.7 |  |  |  |  |  |
| '256QAM' | 13.4 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.4 | 13.4 | 12.5 | 12.5 | 12.5 | 12.5 |  |  |  |  |  |

Table 6.2.2.1.1-5: PSSCH/PSCCH MPR simulation results for SL Non-contiguous CA with 2x23dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+G10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 |  |  |  |  |  |  |  |  |
| 'QPSK' | 16.5 | 7.7 | 16.0 | 7.2 | 15.6 | 6.7 | 14.7 | 6.3 | 13.7 | 5.8 |  |  |  |  |  |  |  |  |
| '16QAM' | 16.5 | 7.7 | 16.0 | 7.2 | 15.6 | 7.2 | 14.7 | 6.3 | 13.7 | 5.8 |  |  |  |  |  |  |  |  |
| '64QAM' | 17.0 | 7.7 | 16.1 | 7.2 | 15.6 | 6.7 | 14.7 | 6.3 | 13.7 | 5.8 |  |  |  |  |  |  |  |  |
| '256QAM' | 16.5 | 7.7 | 16.0 | 7.2 | 15.6 | 6.7 | 14.7 | 6.3 | 13.7 | 5.8 |  |  |  |  |  |  |  |  |
| Scenario # | #11 | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 |  |  |  |  |  |  |  |  |
| 'QPSK' | 13.3 | 8.1 | 12.8 | 9.1 | 12.4 | 10.5 | 12.4 | 11.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '16QAM' | 13.3 | 8.1 | 12.8 | 9.1 | 12.4 | 11.0 | 12.4 | 11.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '64QAM' | 13.3 | 8.1 | 12.8 | 9.1 | 12.4 | 11.0 | 12.4 | 11.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '256QAM' | 13.8 | 8.1 | 14.7 | 9.1 | 13.7 | 13.7 | 13.7 | 13.3 | 13.3 | 13.7 |  |  |  |  |  |  |  |  |
| '10MHz+G50MHz+10MHz' | Scenario # | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 |  |  |  |  |  |  |  |  |
| 'QPSK' | 16.5 | 17.0 | 16.5 | 16.0 | 15.6 | 15.6 | 14.7 | 14.7 | 13.8 | 13.7 |  |  |  |  |  |  |  |  |
| '16QAM' | 16.5 | 17.0 | 16.1 | 16.1 | 15.6 | 15.6 | 14.7 | 14.7 | 13.7 | 13.8 |  |  |  |  |  |  |  |  |
| '64QAM' | 16.5 | 17.0 | 16.5 | 16.0 | 15.6 | 15.6 | 14.7 | 14.7 | 13.8 | 13.8 |  |  |  |  |  |  |  |  |
| '256QAM' | 16.5 | 17.0 | 16.5 | 16.1 | 15.6 | 15.6 | 14.7 | 14.7 | 13.8 | 13.7 |  |  |  |  |  |  |  |  |
| Scenario # | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |  |  |  |  |  |  |  |  |
| 'QPSK' | 13.3 | 13.3 | 12.8 | 12.8 | 12.4 | 12.4 | 12.4 | 12.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '16QAM' | 13.3 | 13.3 | 12.8 | 12.8 | 12.4 | 12.4 | 12.4 | 12.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '64QAM' | 13.3 | 13.3 | 12.8 | 12.8 | 12.4 | 12.4 | 12.4 | 12.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '256QAM' | 13.8 | 13.3 | 14.2 | 14.2 | 13.7 | 13.8 | 13.7 | 13.7 | 13.7 | 13.7 |  |  |  |  |  |  |  |  |
| '10MHz+G10MHz+20MHz' | Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 |  |  |  |  |  |
| 'QPSK' | 16.5 | 7.7 | 16.0 | 7.2 | 15.6 | 7.2 | 14.7 | 6.3 | 13.7 | 5.8 | 13.3 | 8.6 | 12.8 |  |  |  |  |  |
| '16QAM' | 17.0 | 7.7 | 16.0 | 7.2 | 15.6 | 6.7 | 14.7 | 6.3 | 13.7 | 5.8 | 13.3 | 8.6 | 12.8 |  |  |  |  |  |
| '64QAM' | 17.0 | 7.7 | 16.0 | 7.2 | 15.6 | 6.7 | 14.7 | 6.3 | 13.7 | 5.8 | 13.3 | 8.6 | 12.8 |  |  |  |  |  |
| '256QAM' | 17.0 | 7.7 | 16.0 | 7.2 | 15.6 | 6.7 | 14.7 | 6.3 | 13.7 | 5.8 | 13.3 | 8.6 | 13.7 |  |  |  |  |  |
| Scenario # | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 |  |  |  |  |  |
| 'QPSK' | 9.6 | 12.4 | 11.0 | 12.4 | 11.9 | 11.9 | 11.9 | 11.0 | 10.5 | 9.1 | 9.1 | 8.1 | 8.1 |  |  |  |  |  |
| '16QAM' | 9.6 | 12.4 | 11.0 | 12.4 | 11.9 | 11.9 | 11.9 | 10.5 | 10.5 | 9.1 | 9.1 | 8.1 | 8.1 |  |  |  |  |  |
| '64QAM' | 9.6 | 12.4 | 11.0 | 12.4 | 11.9 | 11.9 | 11.9 | 11.0 | 10.5 | 9.1 | 9.1 | 8.1 | 8.1 |  |  |  |  |  |
| '256QAM' | 9.6 | 14.2 | 13.7 | 13.3 | 13.3 | 13.7 | 13.3 | 13.7 | 13.7 | 12.8 | 13.3 | 13.3 | 13.3 |  |  |  |  |  |
| '10MHz+G40MHz+20MHz' | Scenario # | #67 | #68 | #69 | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #70 |  |  |  |  |  |
| 'QPSK' | 16.5 | 16.5 | 16.0 | 16.5 | 15.6 | 15.6 | 14.7 | 14.7 | 13.7 | 13.8 | 13.3 | 13.3 | 12.8 |  |  |  |  |  |
| '16QAM' | 17.0 | 17.0 | 16.1 | 16.5 | 15.6 | 15.6 | 14.7 | 14.7 | 13.7 | 13.8 | 13.3 | 13.3 | 12.8 |  |  |  |  |  |
| '64QAM' | 16.5 | 17.0 | 16.0 | 16.1 | 15.6 | 15.6 | 14.7 | 14.7 | 13.8 | 13.7 | 13.3 | 13.3 | 12.8 |  |  |  |  |  |
| '256QAM' | 16.5 | 16.5 | 16.0 | 16.0 | 15.6 | 15.6 | 14.7 | 14.7 | 13.7 | 13.7 | 13.3 | 13.3 | 14.2 |  |  |  |  |  |
| Scenario # | #80 | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 |  |  |  |  |  |
| 'QPSK' | 12.8 | 12.4 | 12.4 | 12.4 | 12.4 | 11.9 | 11.9 | 11.4 | 11.4 | 11.0 | 11.0 | 10.5 | 10.5 |  |  |  |  |  |
| '16QAM' | 12.8 | 12.4 | 12.4 | 12.4 | 12.4 | 11.9 | 11.9 | 11.4 | 11.4 | 11.0 | 11.0 | 10.5 | 10.5 |  |  |  |  |  |
| '64QAM' | 12.8 | 12.4 | 12.4 | 12.4 | 11.9 | 11.9 | 11.9 | 11.4 | 11.4 | 11.0 | 11.0 | 10.5 | 10.5 |  |  |  |  |  |
| '256QAM' | 13.7 | 13.3 | 13.7 | 13.3 | 13.3 | 13.3 | 13.3 | 13.7 | 13.7 | 12.8 | 12.8 | 12.8 | 12.8 |  |  |  |  |  |

Table 6.2.2.1.1-6: PSSCH/PSCCH MPR simulation results for SL Non-contiguous CA with 2x23dBm+2LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+G10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 |  |  |  |  |  |  |  |  |
| 'QPSK' | 11.6 | 3.9 | 10.7 | 3.5 | 9.3 | 4.7 | 8.3 | 5.1 | 7.8 | 5.1 |  |  |  |  |  |  |  |  |
| '16QAM' | 11.6 | 3.9 | 10.7 | 3.5 | 9.7 | 4.7 | 8.8 | 5.1 | 7.8 | 5.1 |  |  |  |  |  |  |  |  |
| '64QAM' | 11.6 | 3.9 | 10.7 | 3.5 | 9.3 | 4.7 | 8.8 | 5.1 | 7.8 | 5.1 |  |  |  |  |  |  |  |  |
| '256QAM' | 11.6 | 5.1 | 10.7 | 5.1 | 9.3 | 5.1 | 8.8 | 5.5 | 7.8 | 5.5 |  |  |  |  |  |  |  |  |
| Scenario # | #11 | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 |  |  |  |  |  |  |  |  |
| 'QPSK' | 7.4 | 5.5 | 7.4 | 6.0 | 6.9 | 6.4 | 6.9 | 6.4 | 6.9 | 6.9 |  |  |  |  |  |  |  |  |
| '16QAM' | 7.4 | 5.5 | 7.4 | 6.0 | 6.9 | 6.4 | 6.9 | 6.9 | 6.9 | 6.9 |  |  |  |  |  |  |  |  |
| '64QAM' | 7.4 | 5.5 | 7.3 | 6.0 | 6.9 | 6.4 | 6.9 | 6.4 | 6.9 | 6.9 |  |  |  |  |  |  |  |  |
| '256QAM' | 7.4 | 5.5 | 7.4 | 6.0 | 6.9 | 6.4 | 6.9 | 6.9 | 6.9 | 6.9 |  |  |  |  |  |  |  |  |
| '10MHz+G50MHz+10MHz' | Scenario # | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 |  |  |  |  |  |  |  |  |
| 'QPSK' | 11.6 | 11.6 | 10.7 | 10.2 | 9.3 | 9.2 | 8.3 | 8.8 | 7.8 | 7.8 |  |  |  |  |  |  |  |  |
| '16QAM' | 11.6 | 11.6 | 10.7 | 10.7 | 9.7 | 9.2 | 8.8 | 8.8 | 7.8 | 7.8 |  |  |  |  |  |  |  |  |
| '64QAM' | 11.6 | 11.6 | 10.7 | 10.7 | 9.3 | 9.2 | 8.8 | 8.8 | 7.8 | 7.8 |  |  |  |  |  |  |  |  |
| '256QAM' | 11.6 | 11.6 | 10.7 | 10.7 | 9.3 | 9.2 | 8.3 | 8.3 | 7.8 | 7.8 |  |  |  |  |  |  |  |  |
| Scenario # | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |  |  |  |  |  |  |  |  |
| 'QPSK' | 7.8 | 7.3 | 7.4 | 7.3 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |  |  |  |  |  |  |  |  |
| '16QAM' | 7.4 | 7.8 | 7.3 | 7.3 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |  |  |  |  |  |  |  |  |
| '64QAM' | 7.4 | 7.8 | 7.4 | 7.3 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |  |  |  |  |  |  |  |  |
| '256QAM' | 7.4 | 7.3 | 7.4 | 7.3 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |  |  |  |  |  |  |  |  |
| '10MHz+G10MHz+20MHz' | Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 |  |  |  |  |  |
| 'QPSK' | 11.6 | 3.5 | 10.7 | 3.5 | 9.3 | 3.5 | 8.3 | 3.5 | 7.8 | 5.1 | 7.8 | 5.5 | 7.4 |  |  |  |  |  |
| '16QAM' | 11.6 | 3.5 | 10.7 | 3.5 | 9.3 | 3.5 | 8.8 | 3.5 | 7.8 | 5.1 | 7.8 | 5.5 | 7.3 |  |  |  |  |  |
| '64QAM' | 11.6 | 3.5 | 10.7 | 3.5 | 9.3 | 3.5 | 8.8 | 3.5 | 7.8 | 5.1 | 7.4 | 5.5 | 7.4 |  |  |  |  |  |
| '256QAM' | 11.6 | 5.5 | 10.7 | 5.1 | 9.3 | 5.1 | 8.8 | 5.5 | 7.8 | 5.1 | 7.4 | 5.5 | 7.4 |  |  |  |  |  |
| Scenario # | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 |  |  |  |  |  |
| 'QPSK' | 6.0 | 6.9 | 6.4 | 6.9 | 6.9 | 6.9 | 6.9 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 |  |  |  |  |  |
| '16QAM' | 6.0 | 6.9 | 6.4 | 6.9 | 6.9 | 6.9 | 6.9 | 6.4 | 6.4 | 6.4 | 6.4 | 6.0 | 6.4 |  |  |  |  |  |
| '64QAM' | 6.0 | 6.9 | 6.4 | 6.9 | 6.9 | 6.9 | 6.9 | 6.4 | 6.4 | 6.4 | 6.4 | 6.0 | 6.0 |  |  |  |  |  |
| '256QAM' | 6.0 | 6.9 | 6.4 | 6.9 | 6.9 | 6.9 | 6.9 | 6.4 | 6.4 | 6.4 | 6.4 | 6.0 | 6.4 |  |  |  |  |  |
| '10MHz+G40MHz+20MHz' | Scenario # | #67 | #68 | #69 | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #70 |  |  |  |  |  |
| 'QPSK' | 11.6 | 11.1 | 10.7 | 10.7 | 9.3 | 9.2 | 8.8 | 8.3 | 7.8 | 7.8 | 7.3 | 7.3 | 7.3 |  |  |  |  |  |
| '16QAM' | 11.6 | 11.1 | 10.7 | 10.7 | 9.7 | 9.2 | 8.8 | 8.3 | 7.8 | 7.8 | 7.8 | 7.8 | 7.3 |  |  |  |  |  |
| '64QAM' | 11.6 | 11.1 | 10.7 | 10.7 | 9.3 | 9.7 | 8.8 | 8.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.3 |  |  |  |  |  |
| '256QAM' | 11.6 | 11.1 | 10.7 | 10.7 | 9.3 | 9.2 | 8.8 | 8.8 | 7.8 | 7.8 | 7.8 | 7.3 | 7.3 |  |  |  |  |  |
| Scenario # | #80 | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 |  |  |  |  |  |
| 'QPSK' | 7.3 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.4 | 6.4 | 6.0 | 6.0 | 6.0 | 6.0 |  |  |  |  |  |
| '16QAM' | 7.3 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.4 | 6.4 | 6.0 | 6.0 | 6.0 | 6.0 |  |  |  |  |  |
| '64QAM' | 7.3 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.4 | 6.4 | 6.0 | 6.4 | 6.0 | 6.0 |  |  |  |  |  |
| '256QAM' | 7.3 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.4 | 6.4 | 6.0 | 6.0 | 6.0 | 6.0 |  |  |  |  |  |

Same MPR can be defined for all modulation order because big difference between different modulation order is not observed from Table 6.2.2.1.1-4, Table 6.2.2.1.1-5 and Table 6.2.2.1.1-6. .

Table 6.2.2.1.1-7, Table 6.2.2.1.1-8, and Table 6.2.2.1.1-9 show the maximum value of simulation results for SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 in Table 6.2.2.1.1-1 respectively considering B and frequency of FIM3,low\_block,low & FIM3,high\_block,high.

Table 6.2.2.1.1-7 : PSSCH/PSCCH MPR simulation results for SL non-contiguous CA with 1x26dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | 7.4 | 16.7 |
| 5.04 ≤ B < 10.08 | 6.4 | 15.3 |
| 10.08 ≤ B |  | 14.3 |

Table 6.2.2.1.1-8 : PSSCH/PSCCH MPR simulation results for SL non-contiguous CA with 2x23dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | 7.7 | 17.0 |
| 5.04 ≤ B < 10.08 | 7.2 | 15.6 |
| 10.08 ≤ B |  | 14.7 |

Table 6.2.2.1.1-9 : PSSCH/PSCCH MPR simulation results for SL non-contiguous CA with 2x23dBm PA + 2LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | 5.5 | 11.6 |
| 5.04 ≤ B < 10.08 |  | 9.7 |
| 10.08 ≤ B < 20.16 |  | 7.8 |
| 20.16 ≤ B |  | 6.4 |

The MPR can be proposed as Table 6.2.2.1.1-10, Table 6.2.2.1.1-11, and Table 6.2.2.1.1-12 based on the simulation results when considering implementation margin.

Table 6.2.2.1.1-10 : PSSCH/PSCCH MPR for SL non-contiguous CA with 1x26dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ 11.0 | ≤ 18.5 |
| 5.04 ≤ B < 10.08 | ≤ 10.0 | ≤ 17.0 |
| 10.08 ≤ B |  | ≤ 16.0 |

Table 6.2.2.1.1-11 : PSSCH/PSCCH MPR for SL non-contiguous CA with 2x23dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ 11.5 | ≤ 19.0 |
| 5.04 ≤ B < 10.08 | ≤ 11.0 | ≤ 17.5 |
| 10.08 ≤ B |  | ≤ 16.5 |

Table 6.2.2.1.1-12 : PSSCH/PSCCH MPR for SL non-contiguous CA with 2x23dBm PA + 2LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ 7.0 | ≤ 15.0 |
| 5.04 ≤ B < 10.08 |  | ≤ 13.0 |
| 10.08 ≤ B < 20.16 |  | ≤ 12.0 |
| 20.16 ≤ B |  | ≤ 10.0 |

* PC3 MPR

<UE RF architecture>

UE RF architecture in Table 6.2.2.1.1-13 is considered for MPR evaluation.

Table 6.2.2.1.1-13. UE Architecture for PC3 SL non-contiguous CA

|  |  |  |
| --- | --- | --- |
| Arch | description | Remarks |
| #1-1 | 1x23dBm PA+ 1LO | Single–Tx |
| #1-2 | 2x20dBm PA+ 1LO | dual-Tx or txDiversity |
| #2-2 | 2x20dBm PA+ 2LO | dualPA-Architecture |

< Simulation assumption >

The simulation assumption in Table 6.2.2.1.1-14 is considered.

Table 6.2.2.1.1-14. Simulation assumption

|  |  |
| --- | --- |
| Center frequency | 5.9GHz |
| Bandwidth | per CC: 10MHz/20MHz  aggregated CBW: 10MHz +10 MHz/  10MHz+20MHz |
| Aggregated CBW | 10MHz + Gap10MHz + 10MHz  10MHz + Gap50MHz + 10MHz  10MHz + Gap10MHz + 20MHz  10MHz + Gap40MHz + 20MHz |
| Maximum output power for aggregated CBW | 23dBm |
| Numerology | 15 kHz |
| Modulation per CC | QPSK/16QAM/64QAM/256QAM |
| Waveform | CP-OFDM |
| ACLR | 31dBc |
| Carrier leakage | 25dBc |
| IQ image | 34dBc |
| CIM3 | 60dBc |
| PA calibration | PA calibrated to deliver 30dBc ACLR for a fully allocated RBs in 20MHz QPSK DFT- S-OFDM waveform at 1 dB MPR.  This is based to share PA between LTE V2X and NR V2X at 5.9GHz as worst case. |

< Evaluation scenario >

The MPR evaluation scenario in Table 6.2.2.1.1-3 is considered.

< Simulation results >

Table 6.2.2.1.1-15, Table 6.2.2.1.1-16, and Table 6.2.2.1.1-17 show the MPR simulation results for the SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 in Table 6.2.2.1.1-13 respectively.

Table 6.2.2.1.1-15: PSSCH/PSCCH MPR simulation results for SL Non-contiguous CA with 1x23dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+G10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 |  |  |  |  |  |  |  |  |
| 'QPSK' | 13.7 | 6.7 | 13.3 | 6.4 | 12.8 | 5.9 | 11.9 | 5.6 | 11.4 | 6.7 |  |  |  |  |  |  |  |  |
| '16QAM' | 13.7 | 6.7 | 13.7 | 6.4 | 12.8 | 5.9 | 11.9 | 5.6 | 11.4 | 6.7 |  |  |  |  |  |  |  |  |
| '64QAM' | 13.7 | 6.7 | 13.3 | 6.4 | 12.8 | 5.9 | 11.9 | 5.6 | 11.4 | 6.7 |  |  |  |  |  |  |  |  |
| '256QAM' | 13.7 | 6.7 | 13.3 | 6.4 | 12.8 | 5.9 | 11.9 | 5.6 | 11.4 | 6.7 |  |  |  |  |  |  |  |  |
| Scenario # | #11 | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 |  |  |  |  |  |  |  |  |
| 'QPSK' | 10.5 | 6.7 | 10.0 | 6.7 | 9.5 | 6.7 | 9.1 | 8.1 | 8.6 | 8.6 |  |  |  |  |  |  |  |  |
| '16QAM' | 11.0 | 6.7 | 10.0 | 6.7 | 9.5 | 6.7 | 9.1 | 8.1 | 8.6 | 8.6 |  |  |  |  |  |  |  |  |
| '64QAM' | 10.5 | 6.7 | 10.0 | 6.7 | 9.5 | 6.7 | 9.5 | 8.1 | 8.6 | 8.6 |  |  |  |  |  |  |  |  |
| '256QAM' | 11.0 | 6.7 | 11.2 | 6.7 | 11.3 | 11.3 | 11.3 | 10.8 | 11.3 | 11.3 |  |  |  |  |  |  |  |  |
| '10MHz+G50MHz+10MHz' | Scenario # | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 |  |  |  |  |  |  |  |  |
| 'QPSK' | 13.7 | 13.7 | 13.3 | 13.3 | 12.8 | 12.8 | 11.9 | 11.9 | 11.4 | 11.4 |  |  |  |  |  |  |  |  |
| '16QAM' | 13.7 | 13.7 | 13.7 | 13.7 | 12.8 | 12.8 | 11.9 | 11.9 | 11.4 | 11.4 |  |  |  |  |  |  |  |  |
| '64QAM' | 13.7 | 13.7 | 13.7 | 13.3 | 12.8 | 12.8 | 11.9 | 11.9 | 11.4 | 11.4 |  |  |  |  |  |  |  |  |
| '256QAM' | 13.7 | 13.7 | 13.7 | 13.3 | 12.8 | 12.8 | 11.9 | 11.9 | 11.4 | 11.4 |  |  |  |  |  |  |  |  |
| Scenario # | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |  |  |  |  |  |  |  |  |
| 'QPSK' | 11.0 | 10.5 | 10.0 | 10.0 | 9.5 | 9.5 | 9.1 | 9.1 | 8.6 | 8.6 |  |  |  |  |  |  |  |  |
| '16QAM' | 10.5 | 10.5 | 10.0 | 10.0 | 9.5 | 9.5 | 9.1 | 9.1 | 8.6 | 8.6 |  |  |  |  |  |  |  |  |
| '64QAM' | 11.0 | 10.5 | 10.0 | 10.0 | 9.5 | 9.5 | 9.1 | 9.1 | 8.6 | 8.6 |  |  |  |  |  |  |  |  |
| '256QAM' | 11.0 | 10.5 | 11.2 | 11.3 | 11.3 | 11.3 | 10.8 | 10.8 | 11.3 | 11.3 |  |  |  |  |  |  |  |  |
| '10MHz+G10MHz+20MHz' | Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 |  |  |  |  |  |
| 'QPSK' | 13.7 | 6.7 | 13.3 | 6.4 | 12.8 | 5.9 | 11.9 | 5.6 | 11.4 | 6.7 | 10.5 | 6.7 | 10.0 |  |  |  |  |  |
| '16QAM' | 13.7 | 6.7 | 13.3 | 6.4 | 12.8 | 5.9 | 11.9 | 5.6 | 11.4 | 6.7 | 11.0 | 6.7 | 10.0 |  |  |  |  |  |
| '64QAM' | 13.7 | 6.7 | 13.3 | 6.4 | 12.8 | 5.9 | 11.9 | 5.6 | 11.4 | 6.7 | 11.0 | 6.7 | 10.0 |  |  |  |  |  |
| '256QAM' | 13.7 | 6.7 | 13.3 | 6.4 | 12.8 | 5.9 | 11.9 | 5.6 | 12.8 | 6.7 | 11.0 | 6.7 | 10.3 |  |  |  |  |  |
| Scenario # | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 |  |  |  |  |  |
| 'QPSK' | 6.7 | 9.5 | 7.2 | 9.1 | 8.6 | 8.6 | 8.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |  |  |  |  |  |
| '16QAM' | 6.7 | 9.5 | 7.2 | 9.1 | 8.6 | 8.6 | 8.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |  |  |  |  |  |
| '64QAM' | 6.7 | 9.5 | 7.2 | 9.1 | 8.6 | 8.6 | 8.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |  |  |  |  |  |
| '256QAM' | 6.7 | 11.3 | 10.8 | 10.8 | 10.8 | 11.3 | 10.8 | 10.8 | 11.3 | 10.3 | 10.8 | 10.8 | 10.8 |  |  |  |  |  |
| '10MHz+G40MHz+20MHz' | Scenario # | #67 | #68 | #69 | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #70 |  |  |  |  |  |
| 'QPSK' | 13.7 | 13.7 | 13.3 | 13.3 | 12.8 | 12.8 | 11.9 | 11.9 | 11.4 | 11.4 | 10.5 | 10.5 | 10.0 |  |  |  |  |  |
| '16QAM' | 13.7 | 13.7 | 13.3 | 13.7 | 12.8 | 12.8 | 11.9 | 11.9 | 11.4 | 11.4 | 10.5 | 10.5 | 10.0 |  |  |  |  |  |
| '64QAM' | 13.7 | 13.7 | 13.7 | 13.3 | 12.8 | 12.8 | 11.9 | 11.9 | 11.4 | 11.4 | 10.5 | 10.5 | 10.0 |  |  |  |  |  |
| '256QAM' | 13.7 | 13.7 | 13.3 | 13.3 | 12.8 | 12.8 | 11.9 | 11.9 | 11.4 | 11.4 | 10.5 | 10.5 | 10.3 |  |  |  |  |  |
| Scenario # | #80 | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 |  |  |  |  |  |
| 'QPSK' | 10.0 | 9.5 | 9.5 | 9.1 | 9.1 | 8.6 | 8.6 | 8.1 | 7.7 | 6.7 | 6.7 | 6.7 | 6.7 |  |  |  |  |  |
| '16QAM' | 10.0 | 9.5 | 9.5 | 9.1 | 9.1 | 8.6 | 8.6 | 8.1 | 7.7 | 6.7 | 6.7 | 6.7 | 6.7 |  |  |  |  |  |
| '64QAM' | 10.0 | 9.5 | 9.5 | 9.1 | 9.1 | 8.6 | 8.6 | 7.7 | 7.7 | 6.7 | 6.7 | 6.7 | 6.7 |  |  |  |  |  |
| '256QAM' | 11.7 | 11.3 | 11.3 | 10.8 | 10.8 | 10.8 | 10.8 | 11.3 | 11.3 | 10.3 | 10.3 | 10.3 | 10.3 |  |  |  |  |  |

Table 6.2.2.1.1-16: PSSCH/PSCCH MPR simulation results for SL Non-contiguous CA with 2x20dBm+1LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+G10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 |  |  |  |  |  |  |  |  |
| 'QPSK' | 14.4 | 7.5 | 13.9 | 7.2 | 13.0 | 6.7 | 12.4 | 6.3 | 11.9 | 7.5 |  |  |  |  |  |  |  |  |
| '16QAM' | 14.4 | 7.5 | 13.9 | 7.2 | 13.0 | 6.7 | 12.4 | 6.3 | 11.9 | 7.5 |  |  |  |  |  |  |  |  |
| '64QAM' | 14.4 | 7.5 | 13.9 | 7.2 | 13.0 | 6.7 | 12.4 | 6.3 | 11.9 | 7.5 |  |  |  |  |  |  |  |  |
| '256QAM' | 14.4 | 7.5 | 13.9 | 7.2 | 13.0 | 6.7 | 12.4 | 6.3 | 11.9 | 7.5 |  |  |  |  |  |  |  |  |
| Scenario # | #11 | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 |  |  |  |  |  |  |  |  |
| 'QPSK' | 11.6 | 7.5 | 11.2 | 7.5 | 10.2 | 7.5 | 9.3 | 9.5 | 9.5 | 9.5 |  |  |  |  |  |  |  |  |
| '16QAM' | 11.6 | 7.5 | 11.2 | 7.5 | 10.2 | 7.5 | 8.8 | 9.5 | 9.5 | 9.5 |  |  |  |  |  |  |  |  |
| '64QAM' | 11.6 | 7.5 | 11.2 | 7.5 | 10.2 | 7.5 | 9.3 | 9.5 | 9.5 | 9.5 |  |  |  |  |  |  |  |  |
| '256QAM' | 11.6 | 7.5 | 11.5 | 7.5 | 11.2 | 11.5 | 11.3 | 11.5 | 11.5 | 11.5 |  |  |  |  |  |  |  |  |
| '10MHz+G50MHz+10MHz' | Scenario # | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 |  |  |  |  |  |  |  |  |
| 'QPSK' | 14.4 | 14.4 | 13.9 | 13.9 | 13.0 | 13.0 | 12.4 | 12.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '16QAM' | 13.9 | 14.4 | 13.9 | 13.9 | 13.0 | 13.0 | 12.3 | 12.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '64QAM' | 14.4 | 14.4 | 13.9 | 13.9 | 13.0 | 13.0 | 12.4 | 12.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| '256QAM' | 14.4 | 14.4 | 13.9 | 13.9 | 13.0 | 13.0 | 12.4 | 12.4 | 11.9 | 11.9 |  |  |  |  |  |  |  |  |
| Scenario # | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |  |  |  |  |  |  |  |  |
| 'QPSK' | 11.6 | 11.6 | 11.2 | 11.2 | 10.2 | 10.2 | 9.3 | 8.8 | 9.5 | 9.5 |  |  |  |  |  |  |  |  |
| '16QAM' | 11.6 | 11.6 | 11.2 | 11.2 | 10.2 | 10.2 | 8.8 | 8.4 | 9.5 | 9.5 |  |  |  |  |  |  |  |  |
| '64QAM' | 11.6 | 11.6 | 11.2 | 11.2 | 10.2 | 10.2 | 9.3 | 8.8 | 9.5 | 9.5 |  |  |  |  |  |  |  |  |
| '256QAM' | 11.6 | 11.6 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 10.8 | 11.5 | 11.5 |  |  |  |  |  |  |  |  |
| '10MHz+G10MHz+20MHz' | Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 |  |  |  |  |  |
| 'QPSK' | 14.4 | 7.5 | 13.9 | 7.5 | 13.0 | 7.5 | 12.4 | 7.5 | 11.9 | 7.5 | 11.6 | 7.5 | 11.2 |  |  |  |  |  |
| '16QAM' | 13.9 | 7.5 | 13.9 | 7.5 | 13.0 | 7.5 | 12.4 | 7.5 | 11.9 | 7.5 | 11.6 | 7.5 | 11.2 |  |  |  |  |  |
| '64QAM' | 14.4 | 7.5 | 13.9 | 7.5 | 13.0 | 7.5 | 12.3 | 7.5 | 11.9 | 7.5 | 11.6 | 7.5 | 11.2 |  |  |  |  |  |
| '256QAM' | 14.4 | 7.5 | 13.9 | 7.5 | 13.0 | 7.5 | 12.3 | 7.5 | 11.9 | 7.5 | 11.6 | 7.5 | 11.2 |  |  |  |  |  |
| Scenario # | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 |  |  |  |  |  |
| 'QPSK' | 7.5 | 10.2 | 7.5 | 8.8 | 9.5 | 9.5 | 9.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |  |  |  |  |  |
| '16QAM' | 7.5 | 10.2 | 7.5 | 9.3 | 9.5 | 9.5 | 9.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |  |  |  |  |  |
| '64QAM' | 7.5 | 10.2 | 7.5 | 9.3 | 9.5 | 9.5 | 9.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |  |  |  |  |  |
| '256QAM' | 7.5 | 11.2 | 11.5 | 11.3 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |  |  |  |  |  |
| '10MHz+G40MHz+20MHz' | Scenario # | #67 | #68 | #69 | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #70 |  |  |  |  |  |
| 'QPSK' | 14.4 | 14.4 | 13.9 | 13.9 | 13.0 | 13.0 | 12.3 | 12.4 | 11.9 | 11.9 | 11.6 | 11.6 | 11.2 |  |  |  |  |  |
| '16QAM' | 14.4 | 14.4 | 13.9 | 13.9 | 13.0 | 13.0 | 12.4 | 12.8 | 11.9 | 11.9 | 11.6 | 11.6 | 11.2 |  |  |  |  |  |
| '64QAM' | 14.4 | 14.4 | 13.9 | 13.9 | 13.0 | 13.0 | 12.4 | 12.4 | 11.9 | 11.9 | 11.6 | 11.6 | 11.2 |  |  |  |  |  |
| '256QAM' | 14.4 | 14.4 | 13.9 | 13.9 | 13.0 | 13.0 | 12.4 | 12.4 | 11.9 | 11.9 | 11.6 | 11.6 | 11.2 |  |  |  |  |  |
| Scenario # | #80 | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 |  |  |  |  |  |
| 'QPSK' | 10.7 | 10.2 | 10.2 | 8.8 | 8.4 | 9.5 | 9.5 | 8.5 | 8.5 | 7.5 | 7.5 | 7.5 | 7.5 |  |  |  |  |  |
| '16QAM' | 10.7 | 10.2 | 10.2 | 8.8 | 8.8 | 9.5 | 9.5 | 8.5 | 8.5 | 7.5 | 7.5 | 7.5 | 7.5 |  |  |  |  |  |
| '64QAM' | 11.2 | 10.2 | 10.2 | 9.3 | 8.8 | 9.5 | 9.5 | 8.5 | 8.5 | 7.5 | 7.5 | 7.5 | 7.5 |  |  |  |  |  |
| '256QAM' | 11.2 | 11.2 | 11.2 | 11.3 | 10.8 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |  |  |  |  |  |

Table 6.2.2.1.1-17: PSSCH/PSCCH MPR simulation results for SL Non-contiguous CA with 2x20dBm+2LO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| '10MHz+G10MHz+10MHz' | Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 |  |  |  |  |  |  |  |  |
| 'QPSK' | 9.5 | 3.7 | 9.0 | 3.7 | 8.5 | 3.7 | 8.1 | 4.1 | 8.0 | 5.5 |  |  |  |  |  |  |  |  |
| '16QAM' | 9.5 | 3.7 | 9.0 | 3.7 | 8.5 | 3.7 | 8.0 | 4.1 | 8.0 | 5.5 |  |  |  |  |  |  |  |  |
| '64QAM' | 9.5 | 3.7 | 9.0 | 3.7 | 8.5 | 4.1 | 8.0 | 4.1 | 8.0 | 5.5 |  |  |  |  |  |  |  |  |
| '256QAM' | 9.5 | 4.1 | 9.0 | 4.1 | 8.5 | 4.1 | 8.0 | 4.1 | 8.0 | 5.5 |  |  |  |  |  |  |  |  |
| Scenario # | #11 | #12 | #13 | #14 | #15 | #16 | #17 | #18 | #19 | #20 |  |  |  |  |  |  |  |  |
| 'QPSK' | 7.6 | 5.9 | 7.1 | 5.9 | 7.1 | 6.3 | 7.1 | 6.7 | 7.1 | 7.1 |  |  |  |  |  |  |  |  |
| '16QAM' | 7.6 | 5.9 | 7.6 | 5.9 | 7.1 | 6.7 | 7.1 | 6.7 | 7.1 | 7.1 |  |  |  |  |  |  |  |  |
| '64QAM' | 7.6 | 5.9 | 7.6 | 5.9 | 7.1 | 6.3 | 7.1 | 6.7 | 7.1 | 7.1 |  |  |  |  |  |  |  |  |
| '256QAM' | 7.6 | 5.9 | 7.6 | 5.9 | 7.1 | 6.3 | 7.1 | 7.1 | 7.1 | 7.1 |  |  |  |  |  |  |  |  |
| '10MHz+G50MHz+10MHz' | Scenario # | #21 | #22 | #23 | #24 | #25 | #26 | #27 | #28 | #29 | #30 |  |  |  |  |  |  |  |  |
| 'QPSK' | 9.5 | 9.4 | 9.0 | 8.9 | 8.5 | 8.5 | 8.0 | 8.0 | 8.0 | 8.0 |  |  |  |  |  |  |  |  |
| '16QAM' | 9.5 | 9.4 | 9.0 | 8.9 | 8.5 | 8.5 | 8.0 | 8.0 | 8.0 | 8.0 |  |  |  |  |  |  |  |  |
| '64QAM' | 9.5 | 9.4 | 9.0 | 8.9 | 8.5 | 8.5 | 8.1 | 8.0 | 8.0 | 8.0 |  |  |  |  |  |  |  |  |
| '256QAM' | 9.5 | 9.4 | 9.0 | 8.9 | 8.5 | 8.5 | 8.1 | 8.0 | 8.0 | 8.0 |  |  |  |  |  |  |  |  |
| Scenario # | #31 | #32 | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |  |  |  |  |  |  |  |  |
| 'QPSK' | 7.6 | 7.6 | 7.6 | 7.6 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |  |  |  |  |  |  |  |  |
| '16QAM' | 7.6 | 7.6 | 7.6 | 7.6 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |  |  |  |  |  |  |  |  |
| '64QAM' | 7.6 | 7.6 | 7.6 | 7.6 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |  |  |  |  |  |  |  |  |
| '256QAM' | 7.6 | 7.6 | 7.6 | 7.6 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 |  |  |  |  |  |  |  |  |
| '10MHz+G10MHz+20MHz' | Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 | #49 | #50 | #51 | #52 | #53 |  |  |  |  |  |
| 'QPSK' | 9.5 | 3.8 | 9.0 | 3.8 | 8.5 | 3.8 | 8.1 | 3.8 | 8.0 | 5.5 | 7.6 | 5.9 | 7.6 |  |  |  |  |  |
| '16QAM' | 9.5 | 3.8 | 9.0 | 3.8 | 8.5 | 3.8 | 8.0 | 3.8 | 8.0 | 5.5 | 7.6 | 5.9 | 7.6 |  |  |  |  |  |
| '64QAM' | 9.5 | 4.1 | 9.0 | 4.1 | 8.5 | 3.8 | 8.0 | 4.1 | 8.0 | 5.5 | 7.6 | 5.9 | 7.6 |  |  |  |  |  |
| '256QAM' | 9.5 | 4.1 | 9.0 | 4.1 | 8.5 | 4.1 | 8.0 | 4.1 | 8.0 | 5.5 | 7.6 | 5.9 | 7.6 |  |  |  |  |  |
| Scenario # | #54 | #55 | #56 | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 | #65 | #66 |  |  |  |  |  |
| 'QPSK' | 6.3 | 7.1 | 6.7 | 7.1 | 7.1 | 7.1 | 7.1 | 6.7 | 6.7 | 6.7 | 6.7 | 6.3 | 6.3 |  |  |  |  |  |
| '16QAM' | 6.3 | 7.1 | 6.7 | 7.1 | 7.1 | 7.1 | 7.1 | 6.7 | 6.7 | 6.7 | 6.7 | 6.3 | 6.3 |  |  |  |  |  |
| '64QAM' | 6.3 | 7.1 | 6.7 | 7.1 | 7.1 | 7.1 | 7.1 | 6.7 | 6.7 | 6.7 | 6.7 | 6.3 | 6.3 |  |  |  |  |  |
| '256QAM' | 6.3 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |  |  |  |  |  |
| '10MHz+G40MHz+20MHz' | Scenario # | #67 | #68 | #69 | #70 | #71 | #72 | #73 | #74 | #75 | #76 | #77 | #78 | #70 |  |  |  |  |  |
| 'QPSK' | 9.5 | 9.4 | 9.0 | 9.0 | 8.5 | 8.5 | 8.0 | 8.0 | 8.0 | 8.0 | 7.6 | 7.6 | 7.6 |  |  |  |  |  |
| '16QAM' | 9.5 | 9.4 | 9.0 | 9.0 | 8.5 | 8.5 | 8.0 | 8.0 | 8.0 | 8.0 | 7.6 | 7.6 | 7.6 |  |  |  |  |  |
| '64QAM' | 9.5 | 9.4 | 9.0 | 8.9 | 8.5 | 8.5 | 8.0 | 8.0 | 8.0 | 8.0 | 7.6 | 7.6 | 7.6 |  |  |  |  |  |
| '256QAM' | 9.5 | 9.4 | 9.0 | 8.9 | 8.5 | 8.5 | 8.0 | 8.0 | 8.0 | 8.0 | 7.6 | 7.6 | 7.6 |  |  |  |  |  |
| Scenario # | #80 | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 | #89 | #90 | #91 | #92 |  |  |  |  |  |
| 'QPSK' | 7.6 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 6.7 | 6.7 | 6.3 | 6.3 | 6.3 | 6.3 |  |  |  |  |  |
| '16QAM' | 7.6 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 6.7 | 6.7 | 6.3 | 6.3 | 6.3 | 6.3 |  |  |  |  |  |
| '64QAM' | 7.6 | 7.1 | 7.1 | 7.1 | 7.1 | 6.7 | 7.1 | 6.7 | 6.7 | 6.3 | 6.3 | 6.3 | 6.3 |  |  |  |  |  |
| '256QAM' | 7.6 | 7.1 | 7.1 | 7.1 | 7.1 | 6.7 | 7.1 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |  |  |  |  |  |

From Table 6.2.2.1.1-15, Table 6.2.2.1.1-16, and Table 6.2.2.1.1-17, same MPR can be defined for all modulation order because big difference is not observed.

Table 6.2.2.1.1-18, Table 6.2.2.1.1-19, and Table 6.2.2.1.1-20 show the maximum value of simulation results for SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 in Table 6.2.2.1.1-13 respectively considering B and frequency of FIM3,low\_block,low & FIM3,high\_block,high.

Table 6.2.2.1.1-18 : PSSCH/PSCCH MPR simulation results for SL non-contiguous CA with 1x23dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | 6.7 | 13.7 |
| 5.04 ≤ B < 10.08 | 5.9 | 12.8 |
| 10.08 ≤ B |  | 11.3 |

Table 6.2.2.1.1-19 : PSSCH/PSCCH MPR simulation results for SL non-contiguous CA with 2x20dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | 7.5 | 14.4 |
| 5.04 ≤ B < 10.08 | 7.5 | 13.0 |
| 10.08 ≤ B |  | 11.6 |

Table 6.2.2.1.1-20 : PSSCH/PSCCH MPR simulation results for SL non-contiguous CA with 2x20dBm PA + 2LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | 4.1 | 9.5 |
| 5.04 ≤ B < 10.08 | 4.1 | 8.5 |
| 10.08 ≤ B < 20.16 |  | 7.6 |
| 20.16 ≤ B |  | 6.7 |

The MPR can be proposed as Table 6.2.2.1.1-21, Table 6.2.2.1.1-22, and Table 6.2.2.1.1-23 based on the simulation results when considering implementation margin.

Table 6.2.2.1.1-21 : PSSCH/PSCCH MPR for SL non-contiguous CA with 1x23dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ 10.0 | ≤ 16.5 |
| 5.04 ≤ B < 10.08 | ≤ 9.0 | ≤ 15,5 |
| 10.08 ≤ B |  | ≤ 15.0 |

Table 6.2.2.1.1-22 : PSSCH/PSCCH MPR for SL non-contiguous CA with 2x20dBm PA + 1LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ 10.5 | ≤ 17.0 |
| 5.04 ≤ B < 10.08 | ≤ 9.5 | ≤ 16.0 |
| 10.08 ≤ B |  | ≤ 15.5 |

Table 6.2.2.1.1-23 : PSSCH/PSCCH MPR for SL non-contiguous CA with 2x20dBm PA + 2LO

|  |  |  |
| --- | --- | --- |
| B | MPR (dB) for IM3 frequency | |
|  | SEMfreq\_-13 | SEfreq\_-30 |
| 0 ≤ B < 5.04 | ≤ 6.5 | ≤ 13.5 |
| 5.04 ≤ B < 10.08 | ≤ 6.5 | ≤ 12.5 |
| 10.08 ≤ B < 20.16 |  | ≤ 11.5 |
| 20.16 ≤ B |  | ≤ 10.5 |

##### 6.2.2.1.2 Simulation result from OPPO (R4-2419374)

The detail configuration can be found as below table 1. We have modified the table a little bit as we found that larger frequency gap will have better MPR results and hence we choose the max{CBW1, CBW2} as the GAP. The

Table 6.2.2.x-1 channel bandwidth and RB configuration

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ca  se | LC  RB1 | RBST  ART1 | LC  RB2 | RBST  ART2 | SC  S | CB  W1 | CB  W2 | GA  P | Ca  se | LC  RB1 | RBST  ART1 | LC  RB2 | RBST  ART2 | SC  S | CB  W1 | CB  W2 | GA  P |
| 1 | 10 | 0 | 10 | 42 | 15 | 10 | 10 | 10 | 25 | 25 | 19 | 50 | 16 | 15 | 10 | 20 | 20 |
| 2 | 10 | 18 | 10 | 22 | 15 | 10 | 10 | 10 | 26 | 25 | 20 | 50 | 16 | 15 | 10 | 20 | 20 |
| 3 | 10 | 19 | 10 | 22 | 15 | 10 | 10 | 10 | 27 | 25 | 27 | 50 | 2 | 15 | 10 | 20 | 20 |
| 4 | 10 | 27 | 10 | 14 | 15 | 10 | 10 | 10 | 28 | 30 | 0 | 60 | 46 | 15 | 10 | 20 | 20 |
| 5 | 10 | 33 | 10 | 7 | 15 | 10 | 10 | 10 | 29 | 30 | 19 | 60 | 6 | 15 | 10 | 20 | 20 |
| 6 | 10 | 34 | 10 | 7 | 15 | 10 | 10 | 10 | 30 | 30 | 19 | 60 | 4 | 15 | 10 | 20 | 20 |
| 7 | 10 | 42 | 10 | 0 | 15 | 10 | 10 | 10 | 31 | 30 | 22 | 60 | 2 | 15 | 10 | 20 | 20 |
| 8 | 25 | 0 | 25 | 27 | 15 | 10 | 10 | 10 | 32 | 50 | 2 | 100 | 0 | 15 | 10 | 20 | 20 |
| 9 | 25 | 19 | 25 | 8 | 15 | 10 | 10 | 10 | 33 | 10 | 0 | 10 | 41 | 30 | 10 | 20 | 20 |
| 10 | 25 | 20 | 25 | 8 | 15 | 10 | 10 | 10 | 34 | 10 | 2 | 10 | 22 | 30 | 10 | 20 | 20 |
| 11 | 25 | 27 | 25 | 1 | 15 | 10 | 10 | 10 | 35 | 10 | 6 | 10 | 22 | 30 | 10 | 20 | 20 |
| 12 | 30 | 0 | 30 | 22 | 15 | 10 | 10 | 10 | 36 | 10 | 8 | 10 | 14 | 30 | 10 | 20 | 20 |
| 13 | 30 | 19 | 30 | 3 | 15 | 10 | 10 | 10 | 37 | 10 | 10 | 10 | 7 | 30 | 10 | 20 | 20 |
| 14 | 30 | 19 | 30 | 2 | 15 | 10 | 10 | 10 | 38 | 10 | 12 | 10 | 7 | 30 | 10 | 20 | 20 |
| 15 | 30 | 22 | 30 | 1 | 15 | 10 | 10 | 10 | 39 | 10 | 14 | 10 | 0 | 30 | 10 | 20 | 20 |
| 16 | 50 | 2 | 50 | 0 | 15 | 10 | 10 | 10 | 40 | 12 | 0 | 25 | 26 | 30 | 10 | 20 | 20 |
| 17 | 10 | 0 | 20 | 86 | 15 | 10 | 20 | 20 | 41 | 12 | 4 | 25 | 8 | 30 | 10 | 20 | 20 |
| 18 | 10 | 18 | 20 | 44 | 15 | 10 | 20 | 20 | 42 | 12 | 8 | 25 | 8 | 30 | 10 | 20 | 20 |
| 19 | 10 | 19 | 20 | 44 | 15 | 10 | 20 | 20 | 43 | 12 | 12 | 25 | 0 | 30 | 10 | 20 | 20 |
| 20 | 10 | 27 | 20 | 28 | 15 | 10 | 20 | 20 | 44 | 15 | 0 | 30 | 21 | 30 | 10 | 20 | 20 |
| 21 | 10 | 33 | 20 | 14 | 15 | 10 | 20 | 20 | 45 | 15 | 3 | 30 | 3 | 30 | 10 | 20 | 20 |
| 22 | 10 | 34 | 20 | 14 | 15 | 10 | 20 | 20 | 46 | 15 | 7 | 30 | 2 | 30 | 10 | 20 | 20 |
| 23 | 10 | 42 | 20 | 2 | 15 | 10 | 20 | 20 | 47 | 15 | 9 | 30 | 0 | 30 | 10 | 20 | 20 |
| 24 | 25 | 0 | 50 | 56 | 15 | 10 | 20 | 20 | 48 | 24 | 0 | 50 | 0 | 30 | 10 | 20 | 20 |

For intra-band non-contiguous CA, both PC3 and PC2 will be defined in Rel-19 timeline. Below we would like to discuss them separately.

The PC3 intra-band NCCA simulation results are summarized in below table:

Table 6.2.2.x-2 PC3 intra-band NCCA simulation results

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| case | 2PA 1LO | 2PA 2LO | 1PA 1LO | case | 2PA 1LO | 2PA 2LO | 1PA 1LO | case | 2PA 1LO | 2PA 2LO | 1PA 1LO |
| 1 | 8.9 | 2.9 | 7.5 | 17 | 7.4 | 1.9 | 5.8 | 33 | 8.9 | 2.7 | 5.7 |
| 2 | 9.1 | 7.3 | 7.5 | 18 | 6.8 | 5.1 | 5.8 | 34 | 8.7 | 3.4 | 5.7 |
| 3 | 9.2 | 7.7 | 7.6 | 19 | 6.8 | 5.2 | 5.8 | 35 | 8.7 | 6.0 | 5.7 |
| 4 | 9.3 | 7.8 | 7.7 | 20 | 6.8 | 5.3 | 5.8 | 36 | 8.7 | 6.9 | 5.7 |
| 5 | 8.8 | 4.8 | 7.5 | 21 | 6.7 | 3.0 | 5.8 | 37 | 8.8 | 4.8 | 5.7 |
| 6 | 8.8 | 4.8 | 7.5 | 22 | 6.7 | 3.0 | 5.8 | 38 | 8.6 | 4.8 | 5.7 |
| 7 | 9.6 | 7.3 | 10.1 | 23 | 7.2 | 4.9 | 5.8 | 39 | 8.4 | 4.9 | 6.7 |
| 8 | 8.8 | 3.3 | 4.8 | 24 | 7.4 | 2.1 | 3.4 | 40 | 7.5 | 2.0 | 3.5 |
| 9 | 9.0 | 6.7 | 6.6 | 25 | 6.8 | 4.4 | 4.3 | 41 | 6.8 | 4.4 | 4.3 |
| 10 | 9.0 | 6.7 | 6.6 | 26 | 6.9 | 4.4 | 4.3 | 42 | 6.9 | 4.4 | 4.3 |
| 11 | 8.9 | 6.6 | 7.3 | 27 | 6.8 | 4.0 | 4.8 | 43 | 7.3 | 4.1 | 4.9 |
| 12 | 9.0 | 3.4 | 4.9 | 28 | 7.5 | 2.1 | 3.6 | 44 | 7.6 | 2.0 | 3.9 |
| 13 | 9.0 | 6.4 | 6.4 | 29 | 7.0 | 4.0 | 4.1 | 45 | 6.8 | 4.2 | 4.2 |
| 14 | 9.0 | 6.4 | 6.4 | 30 | 6.9 | 3.9 | 4.2 | 46 | 6.9 | 4.1 | 4.6 |
| 15 | 9.0 | 6.4 | 6.9 | 31 | 6.9 | 3.9 | 4.5 | 47 | 6.9 | 4.1 | 4.8 |
| 16 | 9.0 | 6.3 | 6.7 | 32 | 7.4 | 3.9 | 4.5 | 48 | 7.5 | 4.0 | 4.9 |

Similar as the NR intra-band NCCA requirement definition, we proposed below MPR considering the table 2 above.

For -30dBm/MHz IM3:

For 2PA 1LO architecture:

3.6≤B＜9 13

9≤B＜13.5 12

13.5≤B 11

For 2PA 2LO architecture:

3.6≤B＜9 11

9≤B＜13.5 10

13.5≤B 8

For 1PA 1LO architecture:

3.6≤B＜9 11

9≤B＜13.5 10.5

13.5≤B 8

For PC2 intra-band non-contiguous CA, below table 3 captures the simulation results.

Table 6.2.2.x-3, PC2 intra-band NCCA simulation results

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| case | 2PA 1LO | 2PA 2LO | 1PA 1LO | case | 2PA 1LO | 2PA 2LO | 1PA 1LO | case | 2PA 1LO | 2PA 2LO | 1PA 1LO |
| 1 | 8.8 | 7.5 | 10.5 | 17 | 5.7 | 7.5 | 8.7 | 33 | 7.1 | 5.8 | 8.7 |
| 2 | 8.8 | 7.5 | 10.5 | 18 | 5.7 | 6.9 | 8.7 | 34 | 7.1 | 5.8 | 8.7 |
| 3 | 9.3 | 8.0 | 10.5 | 19 | 5.8 | 5.7 | 8.7 | 35 | 7.1 | 5.8 | 8.7 |
| 4 | 9.5 | 8.2 | 10.5 | 20 | 5.7 | 5.7 | 8.7 | 36 | 7.1 | 5.8 | 8.7 |
| 5 | 8.8 | 7.5 | 10.5 | 21 | 5.7 | 5.8 | 8.7 | 37 | 7.1 | 5.8 | 8.7 |
| 6 | 8.8 | 7.5 | 10.5 | 22 | 5.7 | 5.7 | 8.7 | 38 | 7.1 | 5.8 | 8.7 |
| 7 | 9.5 | 8.2 | 10.5 | 23 | 5.7 | 5.7 | 8.7 | 39 | 7.1 | 5.8 | 8.7 |
| 8 | 5.3 | 4.0 | 6.5 | 24 | 2.5 | 5.7 | 4.8 | 40 | 3.8 | 2.5 | 4.8 |
| 9 | 7.8 | 6.5 | 6.7 | 25 | 4.2 | 5.7 | 4.8 | 41 | 5.5 | 4.2 | 4.8 |
| 10 | 7.8 | 6.5 | 6.7 | 26 | 4.2 | 2.5 | 4.8 | 42 | 5.5 | 4.2 | 4.8 |
| 11 | 13.4 | 8.6 | 8.1 | 27 | 4.3 | 4.2 | 5.0 | 43 | 13.2 | 4.7 | 4.8 |
| 12 | 5.4 | 4.1 | 5.7 | 28 | 2.5 | 4.2 | 4.0 | 44 | 3.8 | 2.5 | 4.0 |
| 13 | 7.9 | 6.4 | 6.5 | 29 | 3.9 | 4.3 | 4.2 | 45 | 6.0 | 4.0 | 4.7 |
| 14 | 8.0 | 6.5 | 6.5 | 30 | 3.9 | 2.5 | 4.1 | 46 | 6.7 | 4.5 | 5.4 |
| 15 | 9.4 | 7.5 | 7.3 | 31 | 4.2 | 3.9 | 4.7 | 47 | 7.3 | 4.6 | 5.9 |
| 16 | 8.4 | 6.9 | 6.7 | 32 | 4.0 | 3.9 | 4.1 | 48 | 5.9 | 4.2 | 4.5 |

Similar as the NR intra-band NCCA requirement definition, we proposed below MPR considering the table 3 above.

For -30dBm/MHz IM3:

For 2PA 1LO architecture:

3.6≤B＜9 16.5

9≤B＜13.5 12.5

13.5≤B 11.5

For 2PA 2LO architecture:

3.6≤B＜9 12

9≤B＜13.5 11

13.5≤B 10

For 1PA 1LO architecture:

3.6≤B＜9 14

9≤B＜13.5 11

13.5≤B 10

#### 6.2.2.2 MPR for PSFCH transmission

##### 6.2.2.2.1 Simulation results from LG Electronics (R4-2416066)

* PC2 MPR

< UE RF architecture >

UE RF architecture in Table 6.2.2.1.1-1 is considered for MPR evaluation.

< Evaluation scenario >

The MPR evaluation scenario in Table 6.2.2.2.1-1 is considered.

Table 6.2.2.2.1-1: PSFCH SL intra-band NC CA MPR evaluation scenarios

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Aggregated CBW | Scenario | CC1 | CC2 | Frequency of FIM3,low\_block,low & FIM3,high\_block,high | SCS1 (= SCS2) |
| 10MHz + Gap10MHz+10MHz | 1 | 1RB51 | 1RB0 | SEMfreq\_-13 | 15 |
| 2 | 1RB45 | 1RB5 | SEMfreq\_-13 | 15 |
| 3 | 1RB40 | 1RB10 | SEMfreq\_-13 | 15 |
|  | 4 | 1RB35 | 1RB15 | SEMfreq\_-13 | 15 |
|  | 5 | 1RB30 | 1RB20 | SEfreq\_-30 | 15 |
|  | 6 | 1RB25 | 1RB25 | SEfreq\_-30 | 15 |
|  | 7 | 1RB20 | 1RB30 | SEfreq\_-30 | 15 |
|  | 8 | 1RB2 | 1RB49 | SEfreq\_-30 | 15 |
| 10MHz + Gap50MHz+10MHz | 9 | 1RB51 | 1RB0 | SEfreq\_-30 | 15 |
| 10 | 1RB45 | 1RB5 | SEfreq\_-30 | 15 |
|  | 11 | 1RB40 | 1RB10 | SEfreq\_-30 | 15 |
|  | 12 | 1RB35 | 1RB15 | SEfreq\_-30 | 15 |
|  | 13 | 1RB30 | 1RB20 | SEfreq\_-30 | 15 |
|  | 14 | 1RB25 | 1RB25 | SEfreq\_-30 | 15 |
|  | 15 | 1RB20 | 1RB30 | SEfreq\_-30 | 15 |
|  | 16 | 1RB2 | 1RB49 | SEfreq\_-30 | 15 |
| 10MHz + Gap10MHz+20MHz | 17 | 1RB51 | 1RB0 | SEMfreq\_-13 | 15 |
| 18 | 1RB45 | 1RB10 | SEMfreq\_-13 | 15 |
| 19 | 1RB40 | 1RB20 | SEMfreq\_-13 | 15 |
| 20 | 1RB35 | 1RB30 | SEfreq\_-30 | 15 |
| 21 | 1RB30 | 1RB40 | SEfreq\_-30 | 15 |
| 22 | 1RB25 | 1RB50 | SEfreq\_-30 | 15 |
| 23 | 1RB20 | 1RB60 | SEfreq\_-30 | 15 |
| 24 | 1RB2 | 1RB103 | SEfreq\_-30 | 15 |
| 10MHz + Gap40MHz+20MHz | 25 | 1RB51 | 1RB0 | SEfreq\_-30 | 15 |
| 26 | 1RB45 | 1RB10 | SEfreq\_-30 | 15 |
| 27 | 1RB40 | 1RB20 | SEfreq\_-30 | 15 |
| 28 | 1RB35 | 1RB30 | SEfreq\_-30 | 15 |
| 29 | 1RB30 | 1RB40 | SEfreq\_-30 | 15 |
| 30 | 1RB25 | 1RB50 | SEfreq\_-30 | 15 |
| 31 | 1RB20 | 1RB60 | SEfreq\_-30 | 15 |
| 32 | 1RB2 | 1RB103 | SEfreq\_-30 | 15 |
| 10MHz + Gap10MHz+10MHz | 33 | 1RB23 | 1RB0 | SEMfreq\_-13 | 30 |
| 34 | 1RB21 | 1RB3 | SEMfreq\_-13 | 30 |
| 35 | 1RB18 | 1RB6 | SEMfreq\_-13 | 30 |
| 36 | 1RB16 | 1RB9 | SEMfreq\_-13 | 30 |
| 37 | 1RB14 | 1RB12 | SEfreq\_-30 | 30 |
| 38 | 1RB12 | 1RB15 | SEfreq\_-30 | 30 |
| 39 | 1RB10 | 1RB18 | SEfreq\_-30 | 30 |
| 40 | 1RB0 | 1RB23 | SEfreq\_-30 | 30 |
| 10MHz + Gap50MHz+10MHz | 41 | 1RB23 | 1RB0 | SEfreq\_-30 | 30 |
| 42 | 1RB21 | 1RB3 | SEfreq\_-30 | 30 |
| 43 | 1RB18 | 1RB6 | SEfreq\_-30 | 30 |
| 44 | 1RB16 | 1RB9 | SEfreq\_-30 | 30 |
| 45 | 1RB14 | 1RB12 | SEfreq\_-30 | 30 |
| 46 | 1RB12 | 1RB15 | SEfreq\_-30 | 30 |
| 47 | 1RB10 | 1RB18 | SEfreq\_-30 | 30 |
| 48 | 1RB0 | 1RB23 | SEfreq\_-30 | 30 |
| 10MHz + Gap10MHz+20MHz | 49 | 1RB23 | 1RB0 | SEMfreq\_-13 | 30 |
| 50 | 1RB21 | 1RB5 | SEMfreq\_-13 | 30 |
| 51 | 1RB18 | 1RB10 | SEMfreq\_-13 | 30 |
| 52 | 1RB16 | 1RB15 | SEfreq\_-30 | 30 |
| 53 | 1RB14 | 1RB20 | SEfreq\_-30 | 30 |
| 54 | 1RB12 | 1RB25 | SEfreq\_-30 | 30 |
| 55 | 1RB10 | 1RB30 | SEfreq\_-30 | 30 |
| 56 | 1RB0 | 1RB50 | SEfreq\_-30 | 30 |
| 10MHz + Gap40MHz+20MHz | 57 | 1RB23 | 1RB0 | SEfreq\_-30 | 30 |
| 58 | 1RB21 | 1RB5 | SEfreq\_-30 | 30 |
| 59 | 1RB18 | 1RB10 | SEfreq\_-30 | 30 |
| 60 | 1RB16 | 1RB15 | SEfreq\_-30 | 30 |
| 61 | 1RB14 | 1RB20 | SEfreq\_-30 | 30 |
| 62 | 1RB12 | 1RB25 | SEfreq\_-30 | 30 |
| 63 | 1RB10 | 1RB30 | SEfreq\_-30 | 30 |
| 64 | 1RB0 | 1RB50 | SEfreq\_-30 | 30 |
| 10MHz + Gap10MHz+10MHz | 65 | 1RB10 | 1RB0 | SEMfreq\_-13 | 60 |
| 66 | 1RB9 | 1RB2 | SEMfreq\_-13 | 60 |
| 67 | 1RB8 | 1RB4 | SEMfreq\_-13 | 60 |
| 68 | 1RB7 | 1RB6 | SEMfreq\_-13 | 60 |
| 69 | 1RB6 | 1RB7 | SEfreq\_-30 | 60 |
| 70 | 1RB4 | 1RB8 | SEfreq\_-30 | 60 |
| 71 | 1RB2 | 1RB9 | SEfreq\_-30 | 60 |
| 72 | 1RB0 | 1RB10 | SEfreq\_-30 | 60 |
| 10MHz + Gap50MHz+10MHz | 73 | 1RB10 | 1RB0 | SEfreq\_-30 | 60 |
| 74 | 1RB9 | 1RB2 | SEfreq\_-30 | 60 |
| 75 | 1RB8 | 1RB4 | SEfreq\_-30 | 60 |
| 76 | 1RB7 | 1RB6 | SEfreq\_-30 | 60 |
| 77 | 1RB6 | 1RB7 | SEfreq\_-30 | 60 |
| 78 | 1RB4 | 1RB8 | SEfreq\_-30 | 60 |
| 79 | 1RB2 | 1RB9 | SEfreq\_-30 | 60 |
| 80 | 1RB0 | 1RB10 | SEfreq\_-30 | 60 |
| 10MHz + Gap10MHz+20MHz | 81 | 1RB10 | 1RB0 | SEMfreq\_-13 | 60 |
| 82 | 1RB9 | 1RB4 | SEMfreq\_-13 | 60 |
| 83 | 1RB8 | 1RB6 | SEMfreq\_-13 | 60 |
| 84 | 1RB7 | 1RB8 | SEfreq\_-30 | 60 |
| 85 | 1RB6 | 1RB10 | SEfreq\_-30 | 60 |
| 86 | 1RB4 | 1RB12 | SEfreq\_-30 | 60 |
| 87 | 1RB2 | 1RB15 | SEfreq\_-30 | 60 |
| 88 | 1RB0 | 1RB23 | SEfreq\_-30 | 60 |
| 10MHz + Gap40MHz+20MHz | 89 | 1RB10 | 1RB0 | SEfreq\_-30 | 60 |
| 90 | 1RB9 | 1RB4 | SEfreq\_-30 | 60 |
| 91 | 1RB8 | 1RB6 | SEfreq\_-30 | 60 |
| 92 | 1RB7 | 1RB8 | SEfreq\_-30 | 60 |
| 93 | 1RB6 | 1RB10 | SEfreq\_-30 | 60 |
| 94 | 1RB4 | 1RB12 | SEfreq\_-30 | 60 |
| 95 | 1RB2 | 1RB15 | SEfreq\_-30 | 60 |
| 96 | 1RB0 | 1RB23 | SEfreq\_-30 | 60 |

< Simulation results >

Table 6.2.2.2.1-2, Table 6.2.2.2.1-3, and Table 6.2.2.2.1-4 show the MPR simulation results for the SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 respectively.

Table 6.2.2.2.1-2: PSFCH MPR simulation results for SL Non-contiguous CA with 1x26dBm+1LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 |
| '10MHz+G10MHz+10MHz' | 10.4 | 10.6 | 10.1 | 10.6 | 11.0 | 11.5 | 14.2 | 14.3 |
| Scenario # | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |
| '10MHz+G50MHz+10MHz' | 14.8 | 14.2 | 14.2 | 14.2 | 14.2 | 14.2 | 14.2 | 14.3 |
| Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 |
| '10MHz+G10MHz+20MHz' | 9.4 | 9.6 | 10.6 | 11.0 | 13.3 | 13.8 | 14.2 | 14.3 |
| Scenario # | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+10MHz' | 14.3 | 14.2 | 14.2 | 14.2 | 13.8 | 14.2 | 14.2 | 14.3 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |
| '10MHz+G10MHz+10MHz' | 10.3 | 10.1 | 10.6 | 9.6 | 11.0 | 13.8 | 13.8 | 13.8 |
| Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |
| '10MHz+G50MHz+10MHz' | 13.0 | 14.2 | 13.3 | 14.2 | 13.3 | 14.2 | 13.8 | 13.4 |
| Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 |
| '10MHz+G10MHz+20MHz' | 10.2 | 9.2 | 9.2 | 11.0 | 13.8 | 13.3 | 14.2 | 13.9 |
| Scenario # | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 |
| '10MHz+G40MHz+10MHz' | 14.7 | 13.8 | 13.8 | 14.2 | 14.2 | 13.8 | 13.3 | 14.3 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #65 | #66 | #67 | #68 | #69 | #70 | #71 | #72 |
| '10MHz+G10MHz+10MHz' | 9.2 | 8.7 | 9.6 | 10.1 | 13.3 | 13.3 | 13.3 | 13.4 |
| Scenario # | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 |
| '10MHz+G50MHz+10MHz' | 13.4 | 13.3 | 13.3 | 12.9 | 13.3 | 12.9 | 13.3 | 12.9 |
| Scenario # | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 |
| '10MHz+G10MHz+20MHz' | 9.3 | 8.7 | 9.6 | 10.1 | 13.3 | 12.9 | 12.9 | 13.4 |
| Scenario # | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 |
| '10MHz+G40MHz+10MHz' | 12.9 | 12.9 | 13.3 | 12.9 | 13.3 | 13.3 | 13.3 | 13.4 |

Table 6.2.2.2.1-3: PSFCH MPR simulation results for SL Non-contiguous CA with 2x23dBm+1LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 |
| '10MHz+G10MHz+10MHz' | 10.6 | 11.2 | 10.8 | 11.2 | 11.7 | 11.7 | 14.9 | 15.0 |
| Scenario # | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |
| '10MHz+G50MHz+10MHz' | 14.6 | 14.4 | 14.9 | 14.9 | 14.9 | 14.4 | 14.9 | 14.9 |
| Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 |
| '10MHz+G10MHz+20MHz' | 10.0 | 10.3 | 10.8 | 11.7 | 13.5 | 14.4 | 14.9 | 14.9 |
| Scenario # | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+10MHz' | 15.0 | 14.9 | 14.4 | 14.9 | 14.4 | 14.9 | 14.9 | 14.9 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |
| '10MHz+G10MHz+10MHz' | 10.5 | 10.3 | 10.8 | 10.3 | 11.7 | 14.4 | 14.4 | 14.5 |
| Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |
| '10MHz+G50MHz+10MHz' | 13.6 | 14.9 | 14.0 | 14.9 | 14.0 | 14.9 | 14.4 | 14.1 |
| Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 |
| '10MHz+G10MHz+20MHz' | 9.4 | 9.9 | 9.9 | 11.7 | 14.4 | 13.5 | 14.9 | 14.5 |
| Scenario # | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 |
| '10MHz+G40MHz+10MHz' | 14.4 | 14.4 | 14.4 | 14.9 | 14.4 | 14.4 | 14.0 | 15.0 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #65 | #66 | #67 | #68 | #69 | #70 | #71 | #72 |
| '10MHz+G10MHz+10MHz' | 9.5 | 9.4 | 10.3 | 10.8 | 14.0 | 14.0 | 14.0 | 14.1 |
| Scenario # | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 |
| '10MHz+G50MHz+10MHz' | 13.6 | 14.0 | 14.0 | 13.5 | 13.5 | 13.5 | 13.5 | 13.6 |
| Scenario # | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 |
| '10MHz+G10MHz+20MHz' | 9.5 | 9.4 | 10.3 | 10.8 | 13.5 | 13.5 | 13.5 | 13.6 |
| Scenario # | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 |
| '10MHz+G40MHz+10MHz' | 13.6 | 13.5 | 14.0 | 13.5 | 14.0 | 13.5 | 14.0 | 14.1 |

Table 6.2.2.2.1-4: PSFCH MPR simulation results for SL Non-contiguous CA with 2x23dBm+2LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 |
| '10MHz+G10MHz+10MHz' | 4.2 | 4.2 | 5.1 | 4.9 | 5.5 | 5.3 | 11.4 | 12.1 |
| Scenario # | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |
| '10MHz+G50MHz+10MHz' | 11.5 | 11.9 | 11.9 | 11.4 | 11.9 | 11.9 | 11.4 | 12.1 |
| Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 |
| '10MHz+G10MHz+20MHz' | 4.3 | 5.1 | 5.2 | 5.5 | 11.4 | 9.6 | 11.4 | 12.1 |
| Scenario # | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+10MHz' | 11.6 | 11.4 | 11.9 | 11.4 | 11.9 | 11.0 | 11.9 | 11.6 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |
| '10MHz+G10MHz+10MHz' | 4.0 | 3.9 | 3.9 | 4.8 | 4.4 | 10.5 | 11.4 | 11.6 |
| Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |
| '10MHz+G50MHz+10MHz' | 11.5 | 10.1 | 11.4 | 11.0 | 11.0 | 10.1 | 11.4 | 11.6 |
| Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 |
| '10MHz+G10MHz+20MHz' | 4.0 | 3.9 | 3.9 | 4.4 | 11.4 | 9.6 | 9.6 | 11.6 |
| Scenario # | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 |
| '10MHz+G40MHz+10MHz' | 11.1 | 10.3 | 11.4 | 10.5 | 11.4 | 11.4 | 11.1 | 11.6 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #65 | #66 | #67 | #68 | #69 | #70 | #71 | #72 |
| '10MHz+G10MHz+10MHz' | 4.0 | 3.9 | 4.4 | 4.8 | 9.6 | 9.6 | 9.3 | 9.8 |
| Scenario # | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 |
| '10MHz+G50MHz+10MHz' | 9.7 | 9.3 | 9.3 | 9.3 | 9.6 | 10.1 | 9.6 | 9.5 |
| Scenario # | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 |
| '10MHz+G10MHz+20MHz' | 4.0 | 3.9 | 4.4 | 4.4 | 9.6 | 9.3 | 9.3 | 9.8 |
| Scenario # | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 |
| '10MHz+G40MHz+10MHz' | 9.4 | 9.6 | 9.3 | 9.3 | 9.3 | 9.6 | 9.6 | 9.5 |

Table 6.2.2.2.1-5 shows the maximum value of simulation results for SL non-contiguous CA considering the frequency of FIM3,low\_block,low & FIM3,high\_block,high.

Table 6.2.2.2.1-5 : PC2 PSFCH MPR simulation results for SL non-contiguous CA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | MPR (dB) for IM3 frequency | | | | | |
|  | SEMfreq\_-13 | | | SEfreq\_-30 | | |
| SCS=15kHz  (B=0.36) | SCS=30kHz  (B=0.72) | SCS=60kHz  (B=1.44) | SCS=15kHz  (B=0.36) | SCS=30kHz  (B=0.72) | SCS=60kHz  (B=1.44) |
| 1x26dBm + 1LO | 10.6 | 10.6 | 10.1 | 14.8 | 14.7 | 13.4 |
| 2x23dBm + 1LO | 11.2 | 10.8 | 10.8 | 15.0 | 15.0 | 14.1 |
| 2x23dBm + 2LO | 5.2 | 4.8 | 4.8 | 12.1 | 11.6 | 10.1 |

The MPR can be proposed as Table 6.2.2.2.1-6 based on the simulation results when considering implementation margin.

Table 6.2.2.2.1-6 : PC2 PSFCH MPR for SL non-contiguous CA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | MPR (dB) for IM3 frequency | | | | | |
|  | SEMfreq\_-13 | | | SEfreq\_-30 | | |
| SCS=15kHz  (B=0.36) | SCS=30kHz  (B=0.72) | SCS=60kHz  (B=1.44) | SCS=15kHz  (B=0.36) | SCS=30kHz  (B=0.72) | SCS=60kHz  (B=1.44) |
| 1x26dBm + 1LO | ≤ 15.0 | ≤ 15.0 | ≤ 14.0 | ≤ 20.0 | ≤ 20.0 | ≤ 19.0 |
| 2x23dBm + 1LO | ≤ 15.0 | ≤ 15.0 | ≤ 14.0 | ≤ 20.0 | ≤ 20.0 | ≤ 19.0 |
| 2x23dBm + 2LO | ≤ 9.5 | ≤ 8.5 | ≤ 7.5 | ≤ 16.5 | ≤ 16.0 | ≤ 15.0 |

* PC3 MPR

< UE RF architecture >

UE RF architecture in Table 6.2.2.1.1-13 is considered for MPR evaluation.

< Evaluation scenario >

The MPR evaluation scenario in Table 6.2.2.2.1-1 is considered.

< Simulation results >

Table 6.2.2.2.1-7, Table 6.2.2.2.1-8, and Table 6.2.2.2.1-9 show the MPR simulation results for the SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 respectively.

Table 6.2.2.2.1-7: PSFCH MPR simulation results for SL Non-contiguous CA with 1x23dBm+1LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 |
| '10MHz+G10MHz+10MHz' | 8.8 | 9.0 | 8.5 | 9.0 | 9.0 | 9.5 | 12.2 | 12.3 |
| Scenario # | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |
| '10MHz+G50MHz+10MHz' | 12.4 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.3 |
| Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 |
| '10MHz+G10MHz+20MHz' | 8.3 | 7.6 | 8.5 | 9.0 | 11.3 | 12.2 | 12.2 | 12.3 |
| Scenario # | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+10MHz' | 12.8 | 12.2 | 12.2 | 12.2 | 11.8 | 12.2 | 12.2 | 12.3 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |
| '10MHz+G10MHz+10MHz' | 8.2 | 8.2 | 8.6 | 7.7 | 8.6 | 12.3 | 12.3 | 12.4 |
| Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |
| '10MHz+G50MHz+10MHz' | 11.5 | 12.8 | 11.9 | 12.8 | 11.9 | 12.8 | 12.3 | 11.5 |
| Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 |
| '10MHz+G10MHz+20MHz' | 8.1 | 7.2 | 7.2 | 8.6 | 12.3 | 11.4 | 12.8 | 12.4 |
| Scenario # | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 |
| '10MHz+G40MHz+10MHz' | 12.3 | 12.3 | 12.3 | 12.8 | 12.3 | 12.3 | 11.4 | 12.9 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #65 | #66 | #67 | #68 | #69 | #70 | #71 | #72 |
| '10MHz+G10MHz+10MHz' | 7.3 | 7.2 | 7.2 | 7.7 | 11.4 | 11.9 | 11.9 | 11.5 |
| Scenario # | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 |
| '10MHz+G50MHz+10MHz' | 11.5 | 11.4 | 11.4 | 11.4 | 11.4 | 11.0 | 11.4 | 11.5 |
| Scenario # | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 |
| '10MHz+G10MHz+20MHz' | 7.3 | 7.2 | 7.2 | 7.7 | 11.4 | 11.0 | 11.0 | 11.5 |
| Scenario # | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 |
| '10MHz+G40MHz+10MHz' | 11.5 | 11.4 | 11.4 | 11.4 | 11.9 | 11.4 | 11.9 | 11.9 |

Table 6.2.2.2.1-8: PSFCH MPR simulation results for SL Non-contiguous CA with 2x20dBm+1LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 |
| '10MHz+G10MHz+10MHz' | 9.6 | 9.9 | 9.4 | 9.9 | 10.3 | 10.3 | 13.6 | 13.7 |
| Scenario # | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |
| '10MHz+G50MHz+10MHz' | 13.7 | 13.6 | 13.6 | 13.6 | 13.6 | 13.6 | 13.6 | 13.6 |
| Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 |
| '10MHz+G10MHz+20MHz' | 8.6 | 8.4 | 9.9 | 10.3 | 12.2 | 13.6 | 13.6 | 13.6 |
| Scenario # | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+10MHz' | 13.7 | 13.6 | 13.6 | 13.6 | 13.1 | 13.6 | 13.6 | 13.6 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |
| '10MHz+G10MHz+10MHz' | 8.9 | 8.8 | 9.8 | 8.8 | 9.8 | 13.5 | 13.5 | 13.6 |
| Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |
| '10MHz+G50MHz+10MHz' | 12.7 | 14.0 | 13.1 | 14.0 | 13.1 | 14.0 | 13.5 | 12.7 |
| Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 |
| '10MHz+G10MHz+20MHz' | 8.8 | 7.9 | 7.9 | 9.8 | 13.5 | 12.6 | 14.0 | 13.6 |
| Scenario # | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 |
| '10MHz+G40MHz+10MHz' | 13.5 | 13.5 | 13.5 | 14.0 | 14.0 | 13.5 | 12.6 | 14.1 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #65 | #66 | #67 | #68 | #69 | #70 | #71 | #72 |
| '10MHz+G10MHz+10MHz' | 7.9 | 7.9 | 8.4 | 8.8 | 12.6 | 13.1 | 13.1 | 12.7 |
| Scenario # | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 |
| '10MHz+G50MHz+10MHz' | 12.7 | 12.6 | 12.6 | 12.6 | 12.6 | 12.2 | 12.6 | 12.7 |
| Scenario # | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 |
| '10MHz+G10MHz+20MHz' | 8.0 | 7.9 | 7.9 | 8.8 | 12.6 | 12.2 | 12.2 | 12.7 |
| Scenario # | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 |
| '10MHz+G40MHz+10MHz' | 12.7 | 12.6 | 12.6 | 12.6 | 13.1 | 12.6 | 13.1 | 13.1 |

Table 6.2.2.2.1-9: PSFCH MPR simulation results for SL Non-contiguous CA with 2x20dBm+2LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 |
| '10MHz+G10MHz+10MHz' | 3.4 | 3.6 | 4.3 | 4.3 | 9.0 | 9.0 | 10.0 | 11.0 |
| Scenario # | #9 | #10 | #11 | #12 | #13 | #14 | #15 | #16 |
| '10MHz+G50MHz+10MHz' | 9.9 | 10.3 | 10.8 | 9.8 | 10.3 | 10.8 | 10.0 | 11.0 |
| Scenario # | #17 | #18 | #19 | #20 | #21 | #22 | #23 | #24 |
| '10MHz+G10MHz+20MHz' | 3.7 | 4.3 | 4.3 | 9.0 | 9.8 | 9.5 | 9.8 | 10.6 |
| Scenario # | #25 | #26 | #27 | #28 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+10MHz' | 10.0 | 9.8 | 10.8 | 9.8 | 10.3 | 10.0 | 10.8 | 10.2 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #33 | #34 | #35 | #36 | #37 | #38 | #39 | #40 |
| '10MHz+G10MHz+10MHz' | 3.6 | 3.5 | 3.5 | 4.0 | 9.0 | 10.0 | 10.0 | 10.2 |
| Scenario # | #41 | #42 | #43 | #44 | #45 | #46 | #47 | #48 |
| '10MHz+G50MHz+10MHz' | 10.0 | 9.5 | 10.0 | 10.0 | 10.0 | 9.5 | 10.0 | 10.2 |
| Scenario # | #49 | #50 | #51 | #52 | #53 | #54 | #55 | #56 |
| '10MHz+G10MHz+20MHz' | 3.6 | 3.5 | 3.5 | 9.0 | 10.0 | 9.5 | 9.5 | 10.2 |
| Scenario # | #57 | #58 | #59 | #60 | #61 | #62 | #63 | #64 |
| '10MHz+G40MHz+10MHz' | 10.1 | 9.5 | 9.5 | 10.0 | 10.0 | 10.0 | 9.5 | 10.2 |
|  |  |  |  |  |  |  |  |  |
| Scenario # | #65 | #66 | #67 | #68 | #69 | #70 | #71 | #72 |
| '10MHz+G10MHz+10MHz' | 3.7 | 3.5 | 3.5 | 4.0 | 9.5 | 9.5 | 9.5 | 9.8 |
| Scenario # | #73 | #74 | #75 | #76 | #77 | #78 | #79 | #80 |
| '10MHz+G50MHz+10MHz' | 9.6 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.8 |
| Scenario # | #81 | #82 | #83 | #84 | #85 | #86 | #87 | #88 |
| '10MHz+G10MHz+20MHz' | 3.6 | 3.5 | 3.5 | 8.5 | 9.5 | 9.5 | 9.5 | 9.8 |
| Scenario # | #89 | #90 | #91 | #92 | #93 | #94 | #95 | #96 |
| '10MHz+G40MHz+10MHz' | 9.5 | 9.5 | 9.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.8 |

Table 6.2.2.2.1-10 shows the maximum value of simulation results for SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 considering the frequency of FIM3,low\_block,low & FIM3,high\_block,high.

Table 6.2.2.2.1-10 : PC3 PSFCH MPR simulation results for SL non-contiguous CA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | MPR (dB) for IM3 frequency | | | | | |
|  | SEMfreq\_-13 | | | SEfreq\_-30 | | |
| SCS=15kHz  (B=0.36) | SCS=30kHz  (B=0.72) | SCS=60kHz  (B=1.44) | SCS=15kHz  (B=0.36) | SCS=30kHz  (B=0.72) | SCS=60kHz  (B=1.44) |
| 1x26dBm + 1LO | 9.0 | 8.6 | 7.7 | 12.8 | 12.9 | 11.9 |
| 2x23dBm + 1LO | 9.9 | 9.8 | 8.8 | 13.7 | 14.1 | 13.1 |
| 2x23dBm + 2LO | 4.3 | 4.0 | 4.0 | 11.0 | 10.2 | 9.8 |

The MPR can be proposed as Table 6.2.2.2.1-11 based on the simulation results when considering implementation margin.

Table 6.2.2.2.1-11 : PC3 PSFCH MPR for SL non-contiguous CA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | MPR (dB) for IM3 frequency | | | | | |
|  | SEMfreq\_-13 | | | SEfreq\_-30 | | |
| SCS=15kHz  (B=0.36) | SCS=30kHz  (B=0.72) | SCS=60kHz  (B=1.44) | SCS=15kHz  (B=0.36) | SCS=30kHz  (B=0.72) | SCS=60kHz  (B=1.44) |
| 1x26dBm + 1LO | ≤ 12.0 | ≤ 12.0 | ≤ 11.0 | ≤ 18.0 | ≤ 18.0 | ≤ 17.0 |
| 2x23dBm + 1LO | ≤ 12.0 | ≤ 12.0 | ≤ 11.0 | ≤ 18.0 | ≤ 18.0 | ≤ 17.0 |
| 2x23dBm + 2LO | ≤ 9.0 | ≤ 8.0 | ≤ 7.0 | ≤ 16.0 | ≤ 15.5 | ≤ 15.0 |

#### 6.2.2.3 MPR for S-SSB transmission

##### 6.2.2.3.1 Simulation results from LG Electronics (R4-2416066)

* PC2 MPR

< UE RF architecture >

UE RF architecture in Table 6.2.2.1.1-1 is considered for MPR evaluation.

< Evaluation scenario >

The MPR evaluation scenario in Table 6.2.2.3.1-1 is considered.

Table 6.2.2.3.1-1: SSSB SL non-contiguous CA MPR evaluation scenarios

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Aggregated CBW | Scenario | CC1 | CC2 | Frequency of FIM3,low\_block,low & FIM3,high\_block,high | SCS1 (= SCS2) |
| 10MHz + Gap10MHz+10MHz | 1 | 11RB41 | 11RB0 | SEMfreq\_-13 | 15 |
| 2 | 11RB34 | 11RB7 | SEMfreq\_-13 | 15 |
| 3 | 11RB20 | 11RB21 | SEfreq\_-30 | 15 |
|  | 4 | 11RB0 | 11RB41 | SEfreq\_-30 | 15 |
| 10MHz + Gap50MHz+10MHz | 5 | 11RB41 | 11RB0 | SEfreq\_-30 | 15 |
| 6 | 11RB34 | 11RB7 | SEfreq\_-30 | 15 |
| 7 | 11RB20 | 11RB21 | SEfreq\_-30 | 15 |
| 8 | 11RB0 | 11RB41 | SEfreq\_-30 | 15 |
| 10MHz + Gap10MHz+20MHz | 9 | 11RB41 | 11RB0 | SEMfreq\_-13 | 15 |
| 10 | 11RB34 | 11RB14 | SEMfreq\_-13 | 15 |
| 11 | 11RB20 | 11RB42 | SEfreq\_-30 | 15 |
| 12 | 11RB0 | 11RB95 | SEfreq\_-30 | 15 |
| 10MHz + Gap40MHz+20MHz | 13 | 11RB41 | 11RB0 | SEfreq\_-30 | 15 |
| 14 | 11RB34 | 11RB14 | SEfreq\_-30 | 15 |
| 15 | 11RB20 | 11RB42 | SEfreq\_-30 | 15 |
| 16 | 11RB0 | 11RB95 | SEfreq\_-30 | 15 |
| 10MHz + Gap10MHz+10MHz | 17 | 11RB13 | 11RB0 | SEMfreq\_-13 | 30 |
| 18 | 11RB12 | 11RB2 | SEMfreq\_-13 | 30 |
| 19 | 11RB3 | 11RB12 | SEfreq\_-30 | 30 |
| 20 | 11RB0 | 11RB13 | SEfreq\_-30 | 30 |
| 10MHz + Gap50MHz+10MHz | 21 | 11RB13 | 11RB0 | SEfreq\_-30 | 30 |
| 22 | 11RB12 | 11RB2 | SEfreq\_-30 | 30 |
| 23 | 11RB3 | 11RB12 | SEfreq\_-30 | 30 |
| 24 | 11RB0 | 11RB13 | SEfreq\_-30 | 30 |
| 10MHz + Gap10MHz+20MHz | 25 | 11RB13 | 11RB0 | SEMfreq\_-13 | 30 |
| 26 | 11RB12 | 11RB14 | SEfreq\_-30 | 30 |
| 27 | 11RB3 | 11RB30 | SEfreq\_-30 | 30 |
| 28 | 11RB0 | 11RB40 | SEfreq\_-30 | 30 |
| 10MHz + Gap40MHz+20MHz | 29 | 11RB13 | 11RB0 | SEfreq\_-30 | 30 |
| 30 | 11RB12 | 11RB14 | SEfreq\_-30 | 30 |
| 31 | 11RB3 | 11RB30 | SEfreq\_-30 | 30 |
| 32 | 11RB0 | 11RB40 | SEfreq\_-30 | 30 |

< Simulation results >

Table 6.2.2.3.1-2, Table 6.2.2.3.1-3, and Table 6.2.2.3.1-4 show the MPR simulation results for the SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 respectively.

Table 6.2.2.3.1-2 SSSB MPR simulation results for SL Non-contiguous CA with 1x26dBm+1LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #17 | #18 | #19 | #20 |
| '10MHz+G10MHz+10MHz' | 9.6 | 10.1 | 18.9 | 20.3 | 9.1 | 8.3 | 16.6 | 17.0 |
| Scenario # | #5 | #6 | #7 | #8 | #21 | #22 | #23 | #24 |
| '10MHz+G50MHz+10MHz' | 19.4 | 19.8 | 19.8 | 19.8 | 17.5 | 17.5 | 17.5 | 17.1 |
| Scenario # | #9 | #10 | #11 | #12 | #25 | #26 | #27 | #28 |
| '10MHz+G10MHz+20MHz' | 10.0 | 9.6 | 19.8 | 19.4 | 8.9 | 13.8 | 16.6 | 16.6 |
| Scenario # | #13 | #14 | #15 | #16 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+20MHz' | 18.9 | 19.4 | 19.8 | 19.4 | 18.1 | 17.1 | 17.0 | 16.2 |

Table 6.2.2.3.1-3: SSSB MPR simulation results for SL Non-contiguous CA with 2x23dBm+1LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #17 | #18 | #19 | #20 |
| '10MHz+G10MHz+10MHz' | 10.7 | 11.6 | 18.3 | 20.1 | 11.0 | 9.5 | 18.2 | 18.3 |
| Scenario # | #5 | #6 | #7 | #8 | #21 | #22 | #23 | #24 |
| '10MHz+G50MHz+10MHz' | 19.7 | 21.1 | 20.6 | 20.6 | 17.9 | 17.8 | 17.3 | 18.3 |
| Scenario # | #9 | #10 | #11 | #12 | #25 | #26 | #27 | #28 |
| '10MHz+G10MHz+20MHz' | 11.6 | 10.4 | 20.5 | 20.1 | 9.6 | 14.6 | 17.4 | 17.8 |
| Scenario # | #13 | #14 | #15 | #16 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+20MHz' | 19.7 | 20.6 | 20.6 | 21.0 | 17.6 | 18.7 | 16.9 | 17.4 |

Table 6.2.2.3.1-4: SSSB MPR simulation results for SL Non-contiguous CA with 2x23dBm+2LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #17 | #18 | #19 | #20 |
| '10MHz+G10MHz+10MHz' | 2.6 | 3.0 | 11.7 | 12.2 | 4.2 | 5.1 | 7.9 | 7.0 |
| Scenario # | #5 | #6 | #7 | #8 | #21 | #22 | #23 | #24 |
| '10MHz+G50MHz+10MHz' | 12.2 | 12.6 | 12.2 | 12.2 | 7.5 | 7.5 | 8.4 | 7.5 |
| Scenario # | #9 | #10 | #11 | #12 | #25 | #26 | #27 | #28 |
| '10MHz+G10MHz+20MHz' | 2.7 | 5.1 | 12.2 | 12.2 | 4.2 | 7.0 | 7.4 | 8.0 |
| Scenario # | #13 | #14 | #15 | #16 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+20MHz' | 12.2 | 12.2 | 12.6 | 12.2 | 7.5 | 7.9 | 7.9 | 7.5 |

Table 6.2.2.3.1-5 shows the maximum value of simulation results for SL non-contiguous CA considering the frequency of FIM3,low\_block,low & FIM3,high\_block,high.

Table 6.2.2.3.1-5 : PC2 SSSB MPR simulation results for SL non-contiguous CA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | MPR (dB) for IM3 frequency | | | |
|  | SEMfreq\_-13 | | SEfreq\_-30 | |
| SCS=15kHz  (B=3.96) | SCS=30kHz  (B=7.92) | SCS=15kHz  (B=3.96) | SCS=30kHz  (B=7.92) |
| 1x26dBm + 1LO | 10.1 | 9.1 | 20.3 | 18.1 |
| 2x23dBm + 1LO | 11.6 | 11.0 | 21.1 | 18.7 |
| 2x23dBm + 2LO | 5.1 | 5.1 | 12.6 | 8.4 |

The MPR can be proposed as Table 6.2.2.3.1-6 based on the simulation results when considering implementation margin.

Table 6.2.2.3.1-6 : PC2 SSSB MPR for SL non-contiguous CA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | MPR (dB) for IM3 frequency | | | |
|  | SEMfreq\_-13 | | SEfreq\_-30 | |
| SCS=15kHz  (B=3.96) | SCS=30kHz  (B=7.92) | SCS=15kHz  (B=3.96) | SCS=30kHz  (B=7.92) |
| 1x26dBm + 1LO | ≤ 13.0 | ≤ 12.0 | ≤ 22.0 | ≤ 20.0 |
| 2x23dBm + 1LO | ≤ 14.0 | ≤ 13.0 | ≤ 23.0 | ≤ 21.0 |
| 2x23dBm + 2LO | ≤ 9.0 | ≤ 8.0 | ≤ 17.0 | ≤ 15.0 |

* PC3 MPR

< UE RF architecture >

UE RF architecture in Table 6.2.2.1.1-13 is considered for MPR evaluation.

< Evaluation scenario >

The MPR evaluation scenario in Table 6.2.2.3.1-1 is considered.

< Simulation results >

Table 6.2.2.3.1-7, Table 6.2.2.3.1-8, and Table 6.2.2.3.1-9 show the MPR simulation results for the SL non-contiguous CA with architecture #1-1, #1-2, and #2-2 respectively.

Table 6.2.2.3.1-7: SSSB MPR simulation results for SL Non-contiguous CA with 1x23dBm+1LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #17 | #18 | #19 | #20 |
| '10MHz+G10MHz+10MHz' | 8.6 | 8.5 | 16.0 | 16.9 | 7.6 | 7.1 | 14.6 | 14.1 |
| Scenario # | #5 | #6 | #7 | #8 | #21 | #22 | #23 | #24 |
| '10MHz+G50MHz+10MHz' | 16.9 | 16.9 | 17.3 | 16.0 | 14.6 | 15.0 | 14.1 | 14.6 |
| Scenario # | #9 | #10 | #11 | #12 | #25 | #26 | #27 | #28 |
| '10MHz+G10MHz+20MHz' | 8.6 | 9.0 | 16.4 | 16.0 | 6.9 | 10.4 | 15.0 | 14.1 |
| Scenario # | #13 | #14 | #15 | #16 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+20MHz' | 16.5 | 16.9 | 16.5 | 15.2 | 14.3 | 14.6 | 14.1 | 14.6 |

Table 6.2.2.3.1-8: SSSB MPR simulation results for SL Non-contiguous CA with 2x20dBm+1LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #17 | #18 | #19 | #20 |
| '10MHz+G10MHz+10MHz' | 9.6 | 9.6 | 16.5 | 17.0 | 8.4 | 8.4 | 15.3 | 15.3 |
| Scenario # | #5 | #6 | #7 | #8 | #21 | #22 | #23 | #24 |
| '10MHz+G50MHz+10MHz' | 17.8 | 17.0 | 17.4 | 17.5 | 15.3 | 15.3 | 15.3 | 15.8 |
| Scenario # | #9 | #10 | #11 | #12 | #25 | #26 | #27 | #28 |
| '10MHz+G10MHz+20MHz' | 10.0 | 9.6 | 17.4 | 17.0 | 8.6 | 12.0 | 15.8 | 15.8 |
| Scenario # | #13 | #14 | #15 | #16 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+20MHz' | 16.6 | 16.6 | 17.5 | 17.0 | 15.5 | 15.7 | 15.8 | 16.6 |

Table 6.2.2.3.1-9: SSSB MPR simulation results for SL Non-contiguous CA with 2x20dBm+2LO

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario # | #1 | #2 | #3 | #4 | #17 | #18 | #19 | #20 |
| '10MHz+G10MHz+10MHz' | 4.0 | 4.0 | 7.9 | 8.0 | 4.8 | 5.7 | 7.0 | 7.5 |
| Scenario # | #5 | #6 | #7 | #8 | #21 | #22 | #23 | #24 |
| '10MHz+G50MHz+10MHz' | 8.4 | 8.4 | 8.4 | 8.4 | 7.5 | 7.0 | 7.0 | 7.0 |
| Scenario # | #9 | #10 | #11 | #12 | #25 | #26 | #27 | #28 |
| '10MHz+G10MHz+20MHz' | 4.1 | 5.2 | 7.9 | 8.0 | 4.8 | 6.5 | 6.5 | 7.1 |
| Scenario # | #13 | #14 | #15 | #16 | #29 | #30 | #31 | #32 |
| '10MHz+G40MHz+20MHz' | 7.9 | 7.9 | 7.9 | 8.0 | 7.0 | 7.0 | 7.0 | 7.0 |

Table 6.2.2.3.1-10 shows the maximum value of simulation results for SL non-contiguous CA considering the frequency of FIM3,low\_block,low & FIM3,high\_block,high.

Table 6.2.2.3.1-10 : PC3 SSSB MPR simulation results for SL non-contiguous CA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | MPR (dB) for IM3 frequency | | | |
|  | SEMfreq\_-13 | | SEfreq\_-30 | |
| SCS=15kHz  (B=3.96) | SCS=30kHz  (B=7.92) | SCS=15kHz  (B=3.96) | SCS=30kHz  (B=7.92) |
| 1x23dBm + 1LO | 9.0 | 7.6 | 17.3 | 15.0 |
| 2x20dBm + 1LO | 10.0 | 8.6 | 17.8 | 16.6 |
| 2x20dBm + 2LO | 5.2 | 5.7 | 8.4 | 7.5 |

The MPR can be proposed as Table 6.2.2.3.1-11 based on the simulation results when considering implementation margin.

Table 6.2.2.3.1-11 : PC3 SSSB MPR for SL non-contiguous CA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | MPR (dB) for IM3 frequency | | | |
|  | SEMfreq\_-13 | | SEfreq\_-30 | |
| SCS=15kHz  (B=3.96) | SCS=30kHz  (B=7.92) | SCS=15kHz  (B=3.96) | SCS=30kHz  (B=7.92) |
| 1x23dBm + 1LO | ≤ 12.0 | ≤ 10.5 | ≤ 20.0 | ≤ 18.0 |
| 2x20dBm + 1LO | ≤ 13.0 | ≤ 11.5 | ≤ 21.0 | ≤ 20.0 |
| 2x20dBm + 2LO | ≤ 8.5 | ≤ 7.5 | ≤ 15.0 | ≤ 14.0 |

### 6.2.3 UE additional maximum output power reduction

For the A-MPR analysis to comply the US regulation, RAN4 agreed to study and specipy the related PC2 A-MPR requirements with NS\_52 after final FCC regulation for the additional emission limits is released in US.

For the A-MPR analysis to comply the EU reguration, RAN4 need to study and specify the PC3/PC2 A-MPR requirements with NS\_33 based on the merged the interested companies results.

The required EU regulations for SL CA UE with 10MHz CBW are listed as below

1. Additional Spectrum mask: When "NS\_33" is indicated in the cell or pre-configured radio parameters, the power of any V2X UE emission shall not exceed the levels specified in Table 6.5E.2.3.1-1.

Table 6.2.3-1: Additional spectrum mask requirements for 10MHz channel bandwidth

|  |  |  |
| --- | --- | --- |
| Spectrum emission limit (dBm EIRP)/ Channel bandwidth | | |
| ΔfOOB  (MHz) | 10 MHz | Measurement bandwidth |
| ± 0-0.5 | [] | 100 kHz |
| ± 0.5-5 | [] | 100 kHz |
| ± 5-10 | [] | 100 kHz |

1. Additional emission requirements:

Table 6.2.3-2: Additional requirements for "NS\_33"

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Protected band | | Frequency range (MHz) | | | Maximum Level (EIRP2) | MBW (MHz) | NOTE |
| Frequency range | 5925 | | - | 5950 | -30 | 1 | 1 |
| Frequency range | 5815 | | - | 5855 | -30 | 1 | 3 |
| NOTE 1: In the frequency range x-5950MHz, SE requirement of -30dBm/MHz should be applied; where x = max (5925, fc + 15), where fc is the channel centre frequency.  NOTE 2: The EIRP requirement is converted to conducted requirement depend on the supported post antenna connector gain Gpost connector declared by the UE following the principle described in annex I in [11].  NOTE 3: Resolution BW is 10% of the measurement BW and the result should be integrated to achieve the measurement bandwidth. The sweep time shall be set larger than (symbol length)\*(number of points in sweep) to improve the measurement accuracy. | | | | | | | |

1. Additional requirements to protect CEN DSRC:

When "NS\_33" is configured from pre-configured radio parameters or the cell, and the indication from upper layers has indicated that the UE is within the protection zone of CEN DSRC devices or HDR DSRC devices, the power of any NR V2X UE emission shall fulfil either one of the two sets of conditions.

Table 6.5E.3.4.2-2: Requirements for spurious emissions to protect CEN DSRC for V2X UE

|  |  |  |
| --- | --- | --- |
|  | Maximum Transmission Power (dBm EIRP1) | Emission Limit in Frequency Range 5795-5815 (dBm/MHz EIRP1) |
| Condition 1 | 10 | -65 |
| Condition 2 | 10 | -45 |
| NOTE 1: The EIRP requirement is converted to conducted requirement depend on the supported post antenna connector gain Gpost connector declared by the UE following the principle described in annex I in [11]. | | |

### 6.2.4 Configured transmitted power

<Editor Note> The detail requirements are FFS.

### 6.2.5 Other Tx requirements

<Editor Note> The detail requirements are FFS.

# 7 Receiver characteristics for NR Sidelink supporting intra-band CA in ITS band

## 7.1 Rx requirements for SL intra-band contiguous CA

### 7.1.1 Reference sensitivity

It is agreed to reuse current PC3 SL intra-band contiguous CA requirement defined in TS 38.101-1 clause 7.3E.2A for PC2 SL intra-band contiguous CA.

### 7.1.2 Maximum input level

It is agreed to reuse current PC3 SL intra-band contiguous CA requirement defined in TS 38.101-1 clause 7.4E.1A for PC2 SL intra-band contiguous CA.

### 7.1.3 Adjacent Channel Selectivity

It is agreed to reuse current PC3 SL intra-band contiguous CA requirement defined in TS 38.101-1 clause 7.5E.1A for PC2 SL intra-band contiguous CA.

### 7.1.4 Blocking characteristics

It is agreed to reuse current PC3 SL intra-band contiguous CA requirement defined in TS 38.101-1 clause 7.6E.2.1A for in-band blocking and clause 7.6E.3.1A for out-of-band blocking for PC2 SL intra-band contiguous CA.

### 7.1.5 Spurious response

It is agreed to reuse current PC3 SL intra-band contiguous CA requirement defined in TS 38.101-1 clause 7.7E.1A for PC2 SL intra-band contiguous CA.

### 7.1.6 Intermodulation characteristics

It is agreed to reuse current PC3 SL intra-band contiguous CA requirement defined in TS 38.101-1 clause 7.8E.2.2A for PC2 SL intra-band contiguous CA.

## 7.2 Rx requirements for SL intra-band non-contiguous CA

### 7.2.1 Reference sensitivity

For intra-band non-contiguous SL CA UE in n47, the reference sensitivity requirement specified in Table 7.3E.2-1 [3] shall apply for each sub-block with all carriers active. The requirement is applied for each sub-block reception when 2 sub-block transmissions are activated at the same time.

### 7.2.2 Maximum input level

For intra-band non-contiguous SL CA, the maximum input level requirements in Section 7.4E.1 [3] will be applied to each sub-block. The throughput (>= 95% T-put) of each DL CC shall meet or exceed the minimum requirements for the specified reference measurement channel in A.7.3 and A.7.4.

### 7.2.3 Adjacent Channel Selectivity

For intra-band non-contiguous SL CA, the UE shall fulfil the minimum requirement specified in Table 7.5E.1-1 to Table 7.5E.1-3 [3] per sub-block where the throughput shall be ≥ 95% of the maximum throughput of the reference measurement channels as specified in Annex A.7.2 while all DL carriers are active.

For the ACS requirement, the UE shall meet the requirements for each sub-block as specified in clauses 7.5E in TS 38.101-1 for one component carrier per sub-block. The UE shall fulfil the minimum requirements all values of a single adjacent channel interferer in-gap and out-of-gap up to a –25 dBm interferer power while all sidelink carriers are active. For the lower range of test parameters (Case 1), the interferer power Pinterferer shall be set to the maximum of the levels given by the carriers of the respective sub-blocks as specified in Table 7.5E-2 in TS 38.101-1 for one component carrier per sub-block. The wanted signal power levels for the carriers of each sub-block shall then be adjusted relative to Pinterferer in accordance with the ACS requirement for each sub-block (Table 7.5E-1 in TS 38.101-1). For the upper range of test parameters (Case 2) for which the interferer power Pinterferer is -25 dBm (Table 7.5E-3 in TS 38.101-1) the wanted signal power levels for the carriers of each sub-block shall be adjusted relative to Pinterferer like for Case 1.

### 7.2.4 Blocking characteristics

For in-band blocking requirement, the UE shall meet the requirements for each sub -block as specified in clause 7.6E.2 in TS 38.101-1for one component carrier per sub-block. The requirements apply for in-gap and out-of-gap interferers while all sidelink carriers are active.

To meet the in-band blocking requirements of the intra-band non-contiguous SL CA, the UE throughput shall be ≥ 95% of the maximum throughput of the reference measurement channels as specified in Annex A.7.2 with the test parameters defined in clause 7.6E.2.1 [3] per sub-block while all downlink carriers are active.

For out-of-band blocking requirement, the UE shall meet the requirements for each sub-block as specified in clauses 7.6E.3 in TS 38.101-1 for one component carrier per sub-block, respectively. The requirements apply with all sidelink carriers active.

To meet the Out-of-band blocking requirements of the intra-band non-contiguous SL CA, the UE throughput shall be ≥ 95% of the maximum throughput of the reference measurement channels as specified in Annex A.7.2 with test parameters defined in clause 7.6E.3.1 [3] per sub-block while all downlink carriers are active.

### 7.2.5 Spurious response

For spurious response requirement, the UE shall meet the requirements for each sub-block as specified in clauses 7.7E in TS 38.101-1for one component carrier per sub-block, respectively. The requirements apply with all sidelink carriers active.

For intra-band non-contiguous SL CA, the UE throughput shall be ≥ 95% of the maximum throughput of the reference measurement channels as specified in Annex A.7.2 with test parameters defined in clause 7.7E.1 [3] per sub-block while all downlink carriers are active.

### 7.2.6 Intermodulation characteristics

For intermodulation characteristics, the UE shall meet the requirements for each sub-block as specified in clauses 7.8E.2 in TS 38.101-1 for one component carrier per sub-block, respectively. The requirements apply with all sidelink carriers active.

For intra-band non-contiguous SL CA, the UE throughput shall be ≥ 95% of the maximum throughput of the reference measurement channels as specified in Annex A.7.2 with test parameters defined in clause 7.8E.2.1 [3] per sub-block while all downlink carriers are active.

# Annex A: Change history

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Cat** | **Subject/Comment** | **New version** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |