**3GPP TSG-RAN4 Meeting #98bis-eR4-2105728**

**Online, 12 – 20 April, 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** |  | **rev** | **1** | **Current version:** | **16.7.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Test cases for RSSI and CO measuerment accuracy in NR-U R16 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Apple | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_unlic-Perf | | | | |  | ***Date:*** | | | 2020-03-16 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The TCs for intra-frequency and inter-frequency RSSI/CO measurement accuracy for NR-U is missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add TCs structure for intra-frequency and inter-frequency RSSI/CO measurement accuracy for NR-U. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The TCs for intra-frequency and inter-frequency RSSI/CO measurement accuracy for NR-U is missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | Section:  A.9.4.5.1, A.9.4.5.2, A.9.4.6.1, A.9.4.6.2,  A.10.5.5.1, A.10.5.5.2, A.10.5.5.3, A.10.5.6.1, A.10.5.6.2, A.10.5.6.3,  A.11.6.5.1, A.11.6.5.2, A.11.6.5.3, A.11.6.6.1, A.11.6.6.2, A.11.6.6.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS38.533 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

Start of Change 1

### A.9.4.5.1 Intra-frequency RSSI measurement accuracy on a carrier with CCA

#### A.9.4.5.1.1 Test Purpose and Environment

The purpose of this test is to verify that the RSSI measurement accuracy is within the specified limits. This test will partially verify the RSSI measurement accuracy requirements in Section 10.1.34.1.

#### A.9.4.5.1.2 Test parameters

In all test cases, Cell 1 is the PCell on a licensed FR1 band and Cell 2 is the SCell with CCA. RSSI is measured on channel number 2. Supported test configurations are shown in table A.9.4.5.1.2-1. The accuracy of RSSI intra-frequency measurements is tested by using the parameters in A.9.4.5.1.2-2 and A.9.4.5.1.2-3.

Table A.9.4.5.1.2-1: Intra frequency RSSI supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | Without CCA: 15 kHz SSB SCS, 10 MHz bandwidth, FDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| 2 | Without CCA: 15 kHz SSB SCS, 10 MHz bandwidth, TDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| 3 | Without CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| NOTE: The UE is only required to be tested in one of the supported test configurations. | |

Table A.9.4.5.1.2-2: RSSI Intra frequency test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 1 | Cell 2 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel | 1 |  | SR.1.1 FDD | SR.1.1 CCA |
| 2,3 | SR.1.1 TDD |
| RMSI CORESET Reference Channel | 1 |  | CR.1.1 FDD | CR.1.1 CCA |
| 2,3 | CR.1.1 TDD |
| Dedicated CORESET Reference Channel | 1 |  | CCR.1.1 FDD | CCR.1.1 CCA |
| 2,3 | CCR.1.1 TDD |
| OCNG Patterns |  |  | OP.1 | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |

Table A.9.4.5.1.2-3: RSSI RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.9.4.5.1.3 Test Requirements

The average RSSI measurement accuracy shall fulfil the requirements in sections 10.1.34.1. The nominal RSSI used to evaluate the requirement shall be based on Io in slots corresponding to RSSI measurement time configuration (RMTC).

### A.9.4.5.2 Inter-frequency RSSI measurement accuracy on a carrier with CCA

#### A.9.4.5.2.1 Test Purpose and Environment

The purpose of this test is to verify that the RSSI measurement accuracy is within the specified limits. This test will partially verify the RSSI measurement accuracy requirements in Section 10.1.34.2.

#### A.9.4.5.2.2 Test parameters

In all test cases, Cell 1 is the PCell on a licensed FR1 band and Cell 2 is the neighbour with CCA. RSSI is measured on channel number 2. Supported test configurations are shown in table A.9.4.5.2.2-1. The accuracy of RSSI inter-frequency measurements is tested by using the parameters in A.9.4.5.2.2-2 and A.9.4.5.2.3.

Table A.9.4.5.2.2-1: Inter frequency RSSI supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | Without CCA: 15 kHz SSB SCS, 10 MHz bandwidth, FDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| 2 | Without CCA: 15 kHz SSB SCS, 10 MHz bandwidth, TDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| 3 | Without CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| NOTE: The UE is only required to be tested in one of the supported test configurations. | |

Table A.9.4.5.2.2-2: RSSI Inter frequency test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 1 | Cell 2 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel | 1 |  | SR.1.1 FDD | NA |
| 2,3 | SR.1.1 TDD |
| RMSI CORESET Reference Channel | 1 |  | CR.1.1 FDD | NA |
| 2,3 | CR.1.1 TDD |
| Dedicated CORESET Reference Channel | 1 |  | CCR.1.1 FDD | NA |
| 2,3 | CCR.1.1 TDD |
| OCNG Patterns |  |  | OP.1 | NA |
| EPRE ratio of PSS to SSS |  | dB | 0 | NA |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |

Table A.9.4.5.2.2-3: RSSI RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.9.4.5.2.3 Test Requirements

The average RSSI measurement accuracy shall fulfil the requirements in sections 10.1.34.2. The nominal RSSI used to evaluate the requirement shall be based on Io in slots corresponding to RSSI measurement time configuration (RMTC).

### A.9.4.6.1 Intra-frequency channel occupancy measurement accuracy on SCC with CCA

#### A.9.4.6.1.1 Test Purpose and Environment

The purpose of this test is to verify that the channel occupancy measurement accuracy is within the specified limits. This test will partially verify the channel occupancy measurement accuracy requirements in Section 10.1.35.1.

#### A.9.4.6.1.2 Test parameters

In all test cases, Cell 1 is the PCell on a licensed FR1 band and Cell 2 is the SCell with CCA. Channel occupancy is measured on channel number 2. Supported test configurations are shown in table A.9.4.6.1.2-1. The accuracy of channel occupancy intra-frequency measurements is tested by using the parameters in A.9.4.6.1.2-2 and A.9.4.6.1.2-3.

Table A.9.4.6.1.2-1: Intra frequency CO supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | Without CCA: 15 kHz SSB SCS, 10 MHz bandwidth, FDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| 2 | Without CCA: 15 kHz SSB SCS, 10 MHz bandwidth, TDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| 3 | Without CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| NOTE: The UE is only required to be tested in one of the supported test configurations. | |

Table A.9.4.6.1.2-2: CO Intra frequency test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 1 | Cell 2 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel | 1 |  | SR.1.1 FDD | SR.1.1 CCA |
| 2,3 | SR.1.1 TDD |
| RMSI CORESET Reference Channel | 1 |  | CR.1.1 FDD | CR.1.1 CCA |
| 2,3 | CR.1.1 TDD |
| Dedicated CORESET Reference Channel | 1 |  | CCR.1.1 FDD | CCR.1.1 CCA |
| 2,3 | CCR.1.1 TDD |
| OCNG Patterns |  |  | OP.1 | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |
| channelOccupancyThreshold |  | dBm | TBD | |

Table A.9.4.6.1.2-3: CO RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.9.4.6.1.3 Test Requirements

The nominal reported *channelOccupancy s*hall be TBD. At least 90% of channel occupancy reports made by the UE shall indicate this value.

### A.9.4.6.2 Inter-frequency channel occupancy measurement accuracy on a carrier with CCA

#### A.9.4.6.2.1 Test Purpose and Environment

The purpose of this test is to verify that the channel occupancy measurement accuracy is within the specified limits. This test will partially verify the channel occupancy measurement accuracy requirements in Section 10.1.35.2.

#### A.9.4.6.2.2 Test parameters

In all test cases, Cell 1 is the PCell on a licensed FR1 band and Cell 2 is the neighbour with CCA. Channel occupancy is measured on channel number 2. Supported test configurations are shown in table A.9.4.6.2.2-1. The accuracy of channel occupancy inter-frequency measurements is tested by using the parameters in A.9.4.6.2.2-2 and A.9.4.6.2.3.

Table A.9.4.6.2.2-1: Inter frequency CO supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | Without CCA: 15 kHz SSB SCS, 10 MHz bandwidth, FDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| 2 | Without CCA: 15 kHz SSB SCS, 10 MHz bandwidth, TDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| 3 | Without CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode  With CCA: 30 kHz SSB SCS, 40 MHz bandwidth, TDD duplex mode |
| NOTE: The UE is only required to be tested in one of the supported test configurations. | |

Table A.9.4.6.2.2-2: CO Inter frequency test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 1 | Cell 2 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel | 1 |  | SR.1.1 FDD | NA |
| 2,3 | SR.1.1 TDD |
| RMSI CORESET Reference Channel | 1 |  | CR.1.1 FDD | NA |
| 2,3 | CR.1.1 TDD |
| Dedicated CORESET Reference Channel | 1 |  | CCR.1.1 FDD | NA |
| 2,3 | CCR.1.1 TDD |
| OCNG Patterns |  |  | OP.1 | NA |
| EPRE ratio of PSS to SSS |  | dB | 0 | NA |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |
| channelOccupancyThreshold |  | dBm | TBD | |

Table A.9.4.6.2.2-3: CO RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.9.4.6.2.3 Test Requirements

The nominal reported *channelOccupancy s*hall be TBD. At least 90% of channel occupancy reports made by the UE shall indicate this value.

End of Change 1

Start of Change 2

### A.10.5.5.1 RSSI measurement accuracy on PSCC with CCA

#### A.10.5.5.1.1 Test Purpose and Environment

The purpose of this test is to verify that the RSSI measurement accuracy is within the specified limits. This test will partially verify the RSSI measurement accuracy requirements in Section 10.1.34.1.

#### A.10.5.5.1.2 Test parameters

In all test cases, Cell 1 is E-UTRAN PCell on a licensed band, and Cell 2 is PSCell operating on a carrier frequency under CCA. RSSI is measured on channel number 1. Supported test configurations are shown in table A.10.5.5.1.2-1. The accuracy of RSSI intra-frequency measurements is tested by using the parameters in A.10.5.5.1.2-2 and A.10.5.5.1.2-3. The E-UTRAN PCell setting refers to Table A.3.7.2.1-1.

Table A.10.5.5.1.2-1: RSSI supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | LTE FDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| 2 | LTE TDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| NOTE: The UE is only required to pass in one of the supported test configurations above. | |

Table A.10.5.5.1.2-2: RSSI test parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 |
| Cell 2 |
| RF Channel Number |  |  | 1 |
| BWchannel |  | MHz | 40 |
| PCCA\_DL |  |  | TBD |
| PCCA\_UL |  |  | TBD |
| DL CCA model |  |  | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth |
| Channel access bandwidth |  | MHz | 20 |
| DRX Cycle configuration |  | ms | Not Applicable |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD |
| Propagation condition |  | - | AWGN |

Table A.10.5.5.1.2-3: RSSI RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.10.5.5.1.3 Test Requirements

The average RSSI measurement accuracy shall fulfil the requirements in sections 10.1.34.1. The nominal RSSI used to evaluate the requirement shall be based on Io in slots corresponding to RSSI measurement time configuration (RMTC).

### A.10.5.5.2 RSSI measurement accuracy on SCC with CCA

#### A.10.5.5.2.1 Test Purpose and Environment

The purpose of this test is to verify that the RSSI measurement accuracy is within the specified limits. This test will partially verify the RSSI measurement accuracy requirements in Section 10.1.34.1.

#### A.10.5.5.2.2 Test parameters

In all test cases, Cell 1 is E-UTRAN PCell on a licensed band, Cell 2 is PSCell operating on a carrier frequency under CCA, Cell 3 is SCell on a carrier frequency under CCA. RSSI is measured on channel number 2. Supported test configurations are shown in table A.10.5.5.2.2-1. The accuracy of RSSI intra-frequency measurements is tested by using the parameters in A.10.5.5.2.2-2 and A.10.5.5.2.2-3. The E-UTRAN PCell setting refers to Table A.3.7.2.1-1.

Table A.10.5.5.2.2-1: RSSI supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | LTE FDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| 2 | LTE TDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| NOTE: The UE is only required to pass in one of the supported test configurations above. | |

Table A.10.5.5.2.2-2: RSSI test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 2 | Cell 3 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |

Table A.10.5.5.2.2-3: RSSI RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.10.5.5.2.3 Test Requirements

The average RSSI measurement accuracy shall fulfil the requirements in sections 10.1.34.1. The nominal RSSI used to evaluate the requirement shall be based on Io in slots corresponding to RSSI measurement time configuration (RMTC).

### A.10.5.5.3 Inter-frequency RSSI measurement accuracy on a carrier with CCA

#### A.10.5.5.3.1 Test Purpose and Environment

The purpose of this test is to verify that the RSSI measurement accuracy is within the specified limits. This test will partially verify the RSSI measurement accuracy requirements in Section 10.1.34.2.

#### A.10.5.5.3.2 Test parameters

In all test cases, Cell 1 is E-UTRAN PCell on a licensed band, Cell 2 is PSCell operating on a carrier frequency under CCA, and Cell 3 is the neighbour with CCA. RSSI is measured on channel number 2. Supported test configurations are shown in table A.10.5.5.3.2-1. The accuracy of RSSI inter-frequency measurements is tested by using the parameters in A.10.5.5.3.2-2 and A.10.5.5.3.2-3. The E-UTRAN PCell setting refers to Table A.3.7.2.1-1.

Table A.10.5.5.3.2-1: RSSI supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | LTE FDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| 2 | LTE TDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| NOTE: The UE is only required to pass in one of the supported test configurations above. | |

Table A.10.5.5.3.2-2: RSSI test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 2 | Cell 3 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel |  |  | SR.1.1 TDD | NA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 TDD | NA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 TDD | NA |
| OCNG Patterns |  |  | OP.1 | NA |
| EPRE ratio of PSS to SSS |  | dB | 0 | NA |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |

Table A.10.5.5.3.2-3: RSSI RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.10.5.5.3.3 Test Requirements

The average RSSI measurement accuracy shall fulfil the requirements in sections 10.1.34.2. The nominal RSSI used to evaluate the requirement shall be based on Io in slots corresponding to RSSI measurement time configuration (RMTC).

### A.10.5.6.1 Channel occupancy measurement accuracy on PSCC with CCA

#### A.10.5.6.1.1 Test Purpose and Environment

The purpose of this test is to verify that the channel occupancy measurement accuracy is within the specified limits. This test will partially verify the channel occupancy measurement accuracy requirements in Section 10.1.35.1.

#### A.10.5.6.1.2 Test parameters

In all test cases, Cell 1 is E-UTRAN PCell on a licensed band, and Cell 2 is PSCell operating on a carrier frequency under CCA. Channel occupancy is measured on channel number 1. Supported test configurations are shown in table A.10.5.6.1.2-1. The accuracy of channel occupancy intra-frequency measurements is tested by using the parameters in A.10.5.6.1.2-2 and A.10.5.6.1.2-3. The E-UTRAN PCell setting refers to Table A.3.7.2.1-1.

Table A.10.5.6.1.2-1: CO supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | LTE FDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| 2 | LTE TDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| NOTE: The UE is only required to pass in one of the supported test configurations above. | |

Table A.10.5.6.1.2-2: CO test parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 |
| Cell 2 |
| RF Channel Number |  |  | 1 |
| BWchannel |  | MHz | 40 |
| PCCA\_DL |  |  | TBD |
| PCCA\_UL |  |  | TBD |
| DL CCA model |  |  | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth |
| Channel access bandwidth |  | MHz | 20 |
| DRX Cycle configuration |  | ms | Not Applicable |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD |
| Propagation condition |  | - | AWGN |
| channelOccupancyThreshold |  | dBm | TBD |

Table A.10.5.6.1.2-3: CO RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.10.5.6.1.3 Test Requirements

The nominal reported *channelOccupancy s*hall be TBD. At least 90% of channel occupancy reports made by the UE shall indicate this value.

### A.10.5.6.2 Channel occupancy measurement accuracy on SCC with CCA

#### A.10.5.6.2.1 Test Purpose and Environment

The purpose of this test is to verify that the channel occupancy measurement accuracy is within the specified limits. This test will partially verify the channel occupancy measurement accuracy requirements in Section 10.1.35.1.

#### A.10.5.6.2.2 Test parameters

In all test cases, Cell 1 is E-UTRAN PCell on a licensed band, Cell 2 is PSCell operating on a carrier frequency under CCA, Cell 3 is SCell on a carrier frequency under CCA. Channel occupancy is measured on channel number 2. Supported test configurations are shown in table A.10.5.6.2.2-1. The accuracy of channel occupancy intra-frequency measurements is tested by using the parameters in A.10.5.6.2.2-2 and A.10.5.6.2.2-3. The E-UTRAN PCell setting refers to Table A.3.7.2.1-1.

Table A.10.5.6.2.2-1: CO supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | LTE FDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| 2 | LTE TDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| NOTE: The UE is only required to pass in one of the supported test configurations above. | |

Table A.10.5.6.2.2-2: CO test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 2 | Cell 3 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |
| channelOccupancyThreshold |  | dBm | TBD | |

Table A.10.5.6.2.2-3: CO RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.10.5.6.2.3 Test Requirements

The nominal reported *channelOccupancy s*hall be TBD. At least 90% of channel occupancy reports made by the UE shall indicate this value.

### A.10.5.6.3 Inter-frequency channel occupancy measurement accuracy on a carrier with CCA

#### A.10.5.6.3.1 Test Purpose and Environment

The purpose of this test is to verify that the channel occupancy measurement accuracy is within the specified limits. This test will partially verify the channel occupancy measurement accuracy requirements in Section 10.1.35.2.

#### A.10.5.6.3.2 Test parameters

In all test cases, Cell 1 is E-UTRAN PCell on a licensed band, Cell 2 is PSCell operating on a carrier frequency under CCA, and Cell 3 is the neighbour with CCA. Channel occupancy is measured on channel number 2. Supported test configurations are shown in table A.10.5.6.3.2-1. The accuracy of channel occupancy inter-frequency measurements is tested by using the parameters in A.10.5.6.3.2-2 and A.10.5.6.3.2-3. The E-UTRAN PCell setting refers to Table A.3.7.2.1-1.

Table A.10.5.6.3.2-1: CO supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | LTE FDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| 2 | LTE TDD; NR: TDD, SSB SCS 30 kHz, data SCS 30 kHz, BW 40 MHz |
| NOTE: The UE is only required to pass in one of the supported test configurations above. | |

Table A.10.5.5.3.2-2: CO test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 2 | Cell 3 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel |  |  | SR.1.1 TDD | NA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 TDD | NA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 TDD | NA |
| OCNG Patterns |  |  | OP.1 | NA |
| EPRE ratio of PSS to SSS |  | dB | 0 | NA |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |
| channelOccupancyThreshold |  | dBm | TBD | |

Table A.10.5.6.3.2-3: CO RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.10.5.6.3.3 Test Requirements

The nominal reported *channelOccupancy s*hall be TBD. At least 90% of channel occupancy reports made by the UE shall indicate this value.

End of Change 2

Start of Change 3

### A.11.6.5.1 Intra-frequency RSSI measurement accuracy on PCC with CCA

#### A.11.6.5.1.1 Test Purpose and Environment

The purpose of this test is to verify that the RSSI measurement accuracy is within the specified limits. This test will partially verify the RSSI measurement accuracy requirements in Section 10.1.34.1.

#### A.11.6.5.1.2 Test parameters

In all test cases, Cell 1 is the PCell with CCA. RSSI is measured on channel number 1. Supported test configurations are shown in table A.11.6.5.1.2-1. The accuracy of RSSI intra-frequency measurements is tested by using the parameters in A.11.6.5.1.2-2 and A.11.6.5.1.2-3.

Table A.11.6.5.1.2-1: Intra frequency RSSI supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | NR TDD, SSB SCS 30 kHz, data SCS 30 kHz, bandwidth 40 MHz |

Table A.11.6.5.1.2-2: RSSI Intra frequency test parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 |
| Cell 1 |
| RF Channel Number |  |  | 1 |
| BWchannel |  | MHz | 40 |
| PCCA\_DL |  |  | TBD |
| PCCA\_UL |  |  | TBD |
| DL CCA model |  |  | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth |
| Channel access bandwidth |  | MHz | 20 |
| DRX Cycle configuration |  | ms | Not Applicable |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD |
| Propagation condition |  | - | AWGN |

Table A.11.6.5.1.2-3: RSSI RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.11.6.5.1.3 Test Requirements

The average RSSI measurement accuracy shall fulfil the requirements in sections 10.1.34.1. The nominal RSSI used to evaluate the requirement shall be based on Io in slots corresponding to RSSI measurement time configuration (RMTC).

### A.11.6.5.2 Intra-frequency RSSI measurement accuracy on SCC with CCA

#### A.11.6.5.2.1 Test Purpose and Environment

The purpose of this test is to verify that the RSSI measurement accuracy is within the specified limits. This test will partially verify the RSSI measurement accuracy requirements in Section 10.1.34.1.

#### A.11.6.5.2.2 Test parameters

In all test cases, Cell 1 which is PCell operating on a carrier frequency under CCA, and Cell 2 which is SCell operating on a carrier frequency under CCA. RSSI is measured on channel number 2. Supported test configurations are shown in table A.11.6.5.2.2-1. The accuracy of RSSI intra-frequency measurements is tested by using the parameters in A.11.6.5.2.2-2 and A.11.6.5.2.2-3.

Table A.11.6.5.2.2-1: Intra frequency RSSI supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | NR TDD, SSB SCS 30 kHz, data SCS 30 kHz, bandwidth 40 MHz |

Table A.11.6.5.2.2-2: RSSI Intra frequency test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 1 | Cell 2 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |

Table A.11.6.5.2.2-3: RSSI RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.11.6.5.2.3 Test Requirements

The average RSSI measurement accuracy shall fulfil the requirements in sections 10.1.34.1. The nominal RSSI used to evaluate the requirement shall be based on Io in slots corresponding to RSSI measurement time configuration (RMTC).

### A.11.6.5.3 Inter-frequency RSSI measurement accuracy on a carrier with CCA

#### A.11.6.5.3.1 Test Purpose and Environment

The purpose of this test is to verify that the RSSI measurement accuracy is within the specified limits. This test will partially verify the RSSI measurement accuracy requirements in Section 10.1.34.2.

#### A.11.6.5.3.2 Test parameters

In all test cases, Cell 1 which is PCell operating on a carrier frequency under CCA, and Cell 2 which is neighbor cell operating on a carrier frequency under CCA. RSSI is measured on channel number 2. Supported test configurations are shown in table A.11.6.5.3.2-1. The accuracy of RSSI intra-frequency measurements is tested by using the parameters in A.11.6.5.3.2-2 and A.11.6.5.3.2-3.

Table A.11.6.5.3.2-1: Inter frequency RSSI supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | NR TDD, SSB SCS 30 kHz, data SCS 30 kHz, bandwidth 40 MHz |

Table A.11.6.5.3.2-2: RSSI Inter frequency test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 1 | Cell 2 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |

Table A.11.6.5.3.2-3: RSSI RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.11.6.5.3.3 Test Requirements

The average RSSI measurement accuracy shall fulfil the requirements in sections 10.1.34.2. The nominal RSSI used to evaluate the requirement shall be based on Io in slots corresponding to RSSI measurement time configuration (RMTC).

### A.11.6.6.1 Intra-frequency channel occupancy measurement accuracy on PCC with CCA

#### A.11.6.6.1.1 Test Purpose and Environment

The purpose of this test is to verify that the channel occupancy measurement accuracy is within the specified limits. This test will partially verify the channel occupancy measurement accuracy requirements in Section 10.1.35.1.

#### A.11.6.6.1.2 Test parameters

In all test cases, Cell 1 is the PCell with CCA. channel occupancy is measured on channel number 1. Supported test configurations are shown in table A.11.6.6.1.2-1. The accuracy of channel occupancy intra-frequency measurements is tested by using the parameters in A.11.6.6.1.2-2 and A.11.6.6.1.2-3.

Table A.11.6.6.1.2-1: Intra frequency CO supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | NR TDD, SSB SCS 30 kHz, data SCS 30 kHz, bandwidth 40 MHz |

Table A.11.6.6.1.2-2: CO Intra frequency test parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 |
| Cell 1 |
| RF Channel Number |  |  | 1 |
| BWchannel |  | MHz | 40 |
| PCCA\_DL |  |  | TBD |
| PCCA\_UL |  |  | TBD |
| DL CCA model |  |  | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth |
| Channel access bandwidth |  | MHz | 20 |
| DRX Cycle configuration |  | ms | Not Applicable |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD |
| Propagation condition |  | - | AWGN |
| channelOccupancyThreshold |  | dBm | TBD |

Table A.11.6.6.1.2-3: CO RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.11.6.6.1.3 Test Requirements

The nominal reported *channelOccupancy s*hall be TBD. At least 90% of channel occupancy reports made by the UE shall indicate this value.

### A.11.6.6.2 Intra-frequency channel occupancy measurement accuracy on SCC with CCA

#### A.11.6.6.2.1 Test Purpose and Environment

The purpose of this test is to verify that the channel occupancy measurement accuracy is within the specified limits. This test will partially verify the channel occupancy measurement accuracy requirements in Section 10.1.35.1.

#### A.11.6.6.2.2 Test parameters

In all test cases, Cell 1 which is PCell operating on a carrier frequency under CCA, and Cell 2 which is SCell operating on a carrier frequency under CCA. Channel occupancy is measured on channel number 2. Supported test configurations are shown in table A.11.6.6.2.2-1. The accuracy of channel occupancy intra-frequency measurements is tested by using the parameters in A.11.6.6.2.2-2 and A.11.6.6.2.2-3.

Table A.11.6.6.2.2-1: Intra frequency CO supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | NR TDD, SSB SCS 30 kHz, data SCS 30 kHz, bandwidth 40 MHz |

Table A.11.6.6.2.2-2: CO Intra frequency test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 1 | Cell 2 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |
| channelOccupancyThreshold |  | dBm | TBD | |

Table A.11.6.6.2.2-3: CO RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.11.6.6.2.3 Test Requirements

The nominal reported *channelOccupancy s*hall be TBD. At least 90% of channel occupancy reports made by the UE shall indicate this value.

### A.11.6.6.3 Inter-frequency channel occupancy measurement accuracy on a carrier with CCA

#### A.11.6.6.3.1 Test Purpose and Environment

The purpose of this test is to verify that the channel occupancy measurement accuracy is within the specified limits. This test will partially verify the channel occupancy measurement accuracy requirements in Section 10.1.34.2.

#### A.11.6.6.3.2 Test parameters

In all test cases, Cell 1 which is PCell operating on a carrier frequency under CCA, and Cell 2 which is neighbor cell operating on a carrier frequency under CCA. Channel occupancy is measured on channel number 2. Supported test configurations are shown in table A.11.6.6.3.2-1. The accuracy of channel occupancy intra-frequency measurements is tested by using the parameters in A.11.6.6.3.2-2 and A.11.6.6.3.2-3.

Table A.11.6.6.3.2-1: Inter frequency CO supported test configurations

|  |  |
| --- | --- |
| Configuration | Description |
| 1 | NR TDD, SSB SCS 30 kHz, data SCS 30 kHz, bandwidth 40 MHz |

Table A.11.6.6.3.2-2: CO Inter frequency test parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Configurations | Unit | Test 1 | |
| Cell 1 | Cell 2 |
| RF Channel Number |  |  | 1 | 2 |
| BWchannel |  | MHz | 40 | 40 |
| PCCA\_DL |  |  | NA | TBD |
| PCCA\_UL |  |  | NA | TBD |
| DL CCA model |  |  | N/A | As specifieed in A.3.20.2.1 |
| UL CCA model |  |  | N/A | As specified in A.3.20.2.2 |
| Measurement bandwidth |  |  | Same as channel access bandwidth | |
| Channel access bandwidth |  | MHz | 20 | |
| DRX Cycle configuration |  | ms | Not Applicable | |
| PDSCH Reference measurement channel |  |  | SR.1.1 CCA | SR.1.1 CCA |
| RMSI CORESET Reference Channel |  |  | CR.1.1 CCA | CR.1.1 CCA |
| Dedicated CORESET Reference Channel |  |  | CCR.1.1 CCA | CCR.1.1 CCA |
| OCNG Patterns |  |  | OP.1 | OP.1 |
| EPRE ratio of PSS to SSS |  | dB | 0 | 0 |
| EPRE ratio of PBCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PBCH to PBCH DMRS |  |  |  |  |
| EPRE ratio of PDCCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDCCH to PDCCH DMRS |  |  |  |  |
| EPRE ratio of PDSCH DMRS to SSS |  |  |  |  |
| EPRE ratio of PDSCH to PDSCH |  |  |  |  |
| EPRE ratio of OCNG DMRS to SSS(Note 1) |  |  |  |  |
| EPRE ratio of OCNG to OCNG DMRS (Note 1) |  |  |  |  |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | NA | TBD |
| in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dB | TBD | TBD |
| in slots corresponding to RSSI measurement time configuration (RMTC) |  | dB | NA | TBD |
| SS-RSRP in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/SCS | TBD | TBD |
| SS-RSRP in slots corresponding to RSSI measurement time configuration (RMTC) |  |  | NA | TBD |
| Io within measurement bandwidth in slots not corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | TBD | TBD |
| Io within measurement bandwidth in slots corresponding to RSSI measurement time configuration (RMTC) |  | dBm/BW | NA | TBD |
| Propagation condition |  | - | AWGN | |
| channelOccupancyThreshold |  | dBm | TBD | |

Table A.11.6.6.3.2-3: CO RMTC parameters

|  |  |
| --- | --- |
| measDurationSymbols-r16 | sym14or12 |
| rmtc-Periodicity-r16 | ms40 |
| rmtc-SubframeOffset-r16 | 20 |
| ref-SCS-CP-r16 | kHz15 |
| ReportInterval | ms120 |

#### A.11.6.6.3.3 Test Requirements

The nominal reported *channelOccupancy s*hall be TBD. At least 90% of channel occupancy reports made by the UE shall indicate this value.

End of Change 3