**3GPP TSG-RAN WG4 Meeting #116 R4-2512324**

**Bengaluru, India, August 25th – 29th, 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **draftCR** | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network |  | Core Network |  |

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| ***Title:*** | Draft CR on activated and deactivated SDL SCell measurement delay requirements | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | OPPO | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_LBCA\_Sw-Core | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | 1. For UE supporting low band CA via switching, the activated and deactivated SDL SCell measurement delay requirements need to be defiend. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1. Introduce the activated and deactivated SDL SCell measurement delay requirements for low band CA via switching. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The activated and deactivated SDL SCell measurement delay requirements for low band CA via switching are missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.2.5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS 38.533 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

# <Start of Change 1>

### 9.2.5 Intrafrequency measurements without measurement gaps

#### 9.2.5.1 Intra-frequency cell identification

The UE shall be able to identify a new detectable intra-frequency cell within Tidentify\_intra\_without\_index if the UE is not indicated to report SSB based RRM measurement result with the associated SSB index(*reportQuantityRsIndexes* or *maxNrofRSIndexesToReport* is not configured), or the UE is indicated that the neighbour cell is synchronous with the serving cell (*deriveSSB-IndexFromCell* is enabled). Otherwise the UE shall be able to identify a new detectable intra frequency cell within Tidentify\_intra\_with\_index. The UE shall be able to identify a new detectable intra frequency SS block of an already detected cell within Tidentify\_intra\_without\_index. It is assumed that *deriveSSB-IndexFromCell* is always enabled for FR1 TDD and FR2 with SCS smaller or equal to 480 kHz.

Tidentify\_intra\_without\_index = (TPSS/SSS\_sync\_intra + TSSB\_measurement\_period\_intra) ms

Tidentify\_intra\_with\_index = (TPSS/SSS\_sync\_intra + T SSB\_measurement\_period\_intra + TSSB\_time\_index\_intra) ms

Where:

TPSS/SSS\_sync\_intra: it is the time period used in PSS/SSS detection

- For UE supporting power class 6 with *highSpeedMeasFlagFR2-r17* configured, if SMTC ≤ 40ms, TPSS/SSS\_sync\_intra is given in table 9.2.5.1-11; otherwise, TPSS/SSS\_sync\_intra is given in table 9.2.5.1-2.

- For UE indicating *no-gap-no-interruption* via *NeedForInterruptionInfoNR-r18*, TPSS/SSS\_sync\_intra is given in table 9.2.5.1-1 for FR1 and table 9.2.5.1-2 for FR2. For UE indicating *no-gap-with-interruption* via *NeedForInterruptionInfoNR-r18*, TPSS/SSS\_sync\_intra is given in table 9.2.5.1-17 for FR1 and table 9.2.5.1-18 for FR2.

- Otherwise, TPSS/SSS\_sync\_intra is given in tables 9.2.5.1-1, 9.2.5.1-2, 9.2.5.1-4 (CC with deactivated SCell) or 9.2.5.1-5 (CC with deactivated SCell) or 9.2.5.1-9 (CC with deactivated SCell) or 9.2.5.1-11 or 9.2.5.1-12 (CC with deactivated PSCell) or 9.2.5.1-13 (CC with deactivated PSCell).

TSSB\_time\_index\_intra: it is the time period used to acquire the index of the SSB being measured

- For UE indicating *support3MHz-ChannelBW-Symmetric-r18* and configured to operate on a target cell with 12 PRB SSB in FR1, TSSB\_time\_index\_intra\_less\_than\_5Mhz is given in table 9.2.5.1-23.

- For UE indicating *no-gap-no-interruption* via *NeedForInterruptionInfoNR-r18*, TSSB\_time\_index\_intra is given in table 9.2.5.1-3 for FR1 and table 9.2.5.1-15 for FR2-2. For UE indicating *no-gap-with-interruption* via *NeedForInterruptionInfoNR-r18*, TSSB\_time\_index\_intra is given in table 9.2.5.1-19 for FR1.

- For UE indicating *support3MHz-ChannelBW-Symmetric-r18* and configured to perform measurements on either a deactivated SCell or a deactivated PSCell with 12PRB SSB in FR1, TSSB\_time\_index\_intra\_less\_than\_5MHz is given in table 9.2.5.1-24 (deactivated SCell), table 9.2.5.1-24a (deactivated SCell with *highSpeedMeasCA-Scell-r17*) or in table 9.2.5.1-25 (deactivated PSCell).

- Otherwise, TSSB\_time\_index\_intra is given in tables 9.2.5.1-3, 9.2.5.1-15 (FR2-2), 9.2.5.1-6 (CC with deactivated SCell), 9.2.5.1-10 (CC with deactivated SCell) or 9.2.5.1-14 (CC with deactivated PSCell).

- TSSB\_measurement\_period\_intra: equal to a measurement period of SSB based measurement

- For UE supporting power class 6 with *highSpeedMeasFlagFR2-r17* configured, if SMTC ≤ 40ms, TSSB\_measurement\_period\_intra is given in table 9.2.5.2-7; otherwise, TSSB\_measurement\_period\_intra is given in table 9.2.5.2-2.

- For UE indicating *no-gap-no-interruption* via *NeedForInterruptionInfoNR-r18*, TSSB\_measurement\_period\_intra is given in table 9.2.5.2-1 for FR1 and table 9.2.5.2-2 for FR2. For UE indicating *no-gap-with-interruption* via *NeedForInterruptionInfoNR-r18*, TSSB\_measurement\_period\_intra is given in table 9.2.5.2-10 for FR1 and table table 9.2.5.2-11 for FR2.

- For power class 6 UE supporting *measEnhCAInterFreqFR2-r18* when *highSpeedMeasFlagFR2* is configured, the TSSB\_measurement\_period\_intra given in table 9.2.5.2-7 (if SMTC ≤ 40ms) and table 9.2.5.2-2 (if SMTC > 40ms) shall apply for SCC.

- Otherwise, TSSB\_measurement\_period\_intra is given in table 9.2.5.2-1, table 9.2.5.2-2, table 9.2.5.2-3 (CC with deactivated SCell), 9.2.5.2-4 (CC with deactivated SCell), 9.2.5.2-5 or 9.2.5.2-6 (CC with deactivated SCell), 9.2.5.2-8 (CC with deactivated PSCell) or 9.2.5.2-9 (CC with deactivated PSCell).

- CSSFintra: it is a carrier specific scaling factor and is determined

- according to CSSFoutside\_gap,i in clause 9.1.5.1 for measurement conducted outside measurement gaps, i.e.

- when intra-frequency SMTC is fully non overlapping or partially overlapping with GAP, or

- when intra-frequency SMTC is fully non overlapping with GAP for UE indicating *no-gap-with-interruption*, or

- when intra-frequency SMTC is fully non overlapping or partially overlapping with GAP for UE indicating *no-gap-no-interruption*, or

For a UE that supports Pre-MG, an SMTC occasion is only considered to be overlapped by Pre-MG if the Pre-MG is activated.

if the high layer in TS 38.331 [2] signalling of *smtc2* is configured, the assumed periodicity of intra-frequency SMTC occasions corresponds to the value of higher layer parameter *smtc2*; Otherwise the assumed periodicity of intra-frequency SMTC occasions corresponds to the value of higher layer parameter *smtc1*.

Mpss/sss\_sync\_w/o\_gaps: For a UE supporting FR2-1 power class 1 or 5, Mpss/sss\_sync\_w/o\_gaps =40. For a UE supporting power class 2, Mpss/sss\_sync\_w/o\_gaps =24. For a UE supporting FR2-1 power class 3, Mpss/sss\_sync\_w/o\_gaps =24. For a UE supporting FR2-1 power class 4, Mpss/sss\_sync\_w/o\_gaps =24. For a UE supporting FR2-1 power class 6, Mpss/sss\_sync\_w/o\_gaps =24. For a UE supporting FR2-2 power class 1, Mpss/sss\_sync\_w/o\_gaps = 60. For a UE supporting FR2-2 power class 2, Mpss/sss\_sync\_w/o\_gaps = 36. For a UE supporting FR2-2 power class 3, Mpss/sss\_sync\_w/o\_gaps = 36.

Mmeas\_period\_w/o\_gaps: For a UE supporting FR2-1 power class 1 or 5, Mmeas\_period\_w/o\_gaps =40. For a UE supporting FR2-1 power class 2, Mmeas\_period\_w/o\_gaps =24. For a UE supporting FR2-1 power class 3, Mmeas\_period\_w/o\_gaps =24. For a UE supporting power class 4, Mmeas\_period\_w/o\_gaps =24. For a UE supporting power class 6, Mmeas\_period\_w/o\_gaps =24. For a UE supporting FR2-2 power class 1, Mmeas\_period\_w/o\_gaps = 60. For a UE supporting FR2-2 power class 2, Mmeas\_period\_w/o\_gaps = 36. For a UE supporting FR2-2 power class 3, Mmeas\_period\_w/o\_gaps = 36.

MSSB\_index\_intra: For a UE supporting FR2-2 power class 1, MSSB\_index\_intra = 72 samples. For a UE supporting FR2-2 power class 2, MSSB\_index\_intra = 48 samples. For a UE supporting FR2 power class 3, MSSB\_index\_intra = 48 samples.

When UE supports concurrent GAPs, i.e., supports the following capability or capabilities’ combination:

- concurrentMeasGap-r17, or

- concurrentMeasGapsPreMG-r18, or

- concurrentMeasGapsNCSG-r18,

Or when UE supports *musim-GapPreference-r17* or both concurrent measurement GAPs and *musim-GapPreference-r17* and UE concurrent GAPs or periodic MUSIM gaps or both concurrent gaps and periodic MUSIM gaps are configured

Kp is the scaling factor for an SSB frequency layer to be measured without GAP. Kp = Ntotal / Navailable, where Navailable and Ntotal are calculated as follows:

- For a window W of duration max(SMTC period, xRP\_max, switching pattern periodicity), where xRP\_max is the maximum xRP across all configured per-UE GAPs, periodic MUSIM gaps, and/or per-FR GAPs within the same FR as the SSB frequency layer, and starting from the beginning of any SMTC occasion:

- Ntotal is the total number of SMTC occasions within the window, including those overlapped with GAP and MUSIM gap occasions and those overlapped and non-overlapped with the duration of serving CC to be measured based on the switching pattern within the window,

For UEs supporting *LB CA via switching* and configured with low band CA via switching:

- for the L3 measurement on PCell frequency layer, Ntotal also includes SMTC occasions that overlapped with the SCell ON duration within the window,

- for the L3 measurement on SCell frequency layer, Ntotal also includes SMTC occasions that overlapped with the PCell ON duration within the window, and

- Navailable is the number of SMTC occasions within the window W

- that are not overlapped with any non-dropped GAP or non-dropped MUSIM gap occasions within the window W, after accounting for measurement GAP and MUSIM gap collisions by applying the collision rules for GAP and MUSIM gap in clauses 9.1.8.3, 9.1.10.4, 9.1.10.5, 9.1.12.3, and 9.1.13.3, respectively.

- that are overlapped with PCell ON duration corresponding to the LB CA switching pattern, for the L3 measurement on PCell frequency layer for a UE supporting *LB CA via switching* and configured with low band CA via switching.

- that are overlapped with SCell ON duration corresponding to the LB CA switching pattern, for the L3 measurement on SCell frequency layer for a UE supporting *LB CA via switching* and configured with low band CA via switching, and

Kp = 1 when Navailable = 0.

- xRP = MGRP when configured GAP is activated Pre-MG or MG, and xRP = VIRP when configured GAP is NCSG, also xRP = MGRP for periodic MUSIM gap.

- for UEs that support LB CA via switching, switching pattern periodicity is the periodicity of the RRC configured semi-static switching pattern; otherwise, it is not applicable.

Requirements in this clause do not apply when Navailable = 0 due to fully overlapping between SMTC occasions and MUSIM gap occasions within the window W.

No requirements apply when Navailable = 0 due to fully non-overlapping between SMTC occasions and the duration of serving CC to be measured based on the switching pattern within the window W.

When UE supports [*MUSIM-GapConfig-17]* and the SMTC occasion of the target frequency layer is overlapping with the configured aperiodic MUSIM gap, longer cell identification period for the target frequency layer is expected.

- Otherwise, when the UE is not configured with or UE does not support concurrent GAPs and the UE is not configured with periodic MUSIM gaps or UE does not support MUSIM gaps:

When intra-frequency SMTC is fully non overlapping with measurement gaps or NCSG, or intra-frequency SMTC is fully overlapping with MGs or NCSG, Kp=1

When intra-frequency SMTC is partially overlapping with measurement gaps, Kp = 1/(1- (SMTC period /MGRP)), where SMTC period < MGRP. When intra-frequency SMTC is partially overlapping with NCSG, Kp = 1/(1- (SMTC period /VIRP)), where SMTC period < VIRP. For calculation of Kp, if the high layer signalling (TS 38.331 [2]) of *smtc2* is configured, for cells indicated in the *pci-List* parameter in *smtc2*, the SMTC periodicity corresponds to the value of higher layer parameter *smtc2*; for the other cells, the SMTC periodicity corresponds to the value of higher layer parameter *smtc1.* If the higher layer signaling in TS 38.331 [2] signalling of *smtc2* is present and *smtc1* is fully overlapping with measurement gaps and *smtc2* is partially overlapping with measurement gaps, requirements are not specified for Tidentify\_intra\_without\_index or Tidentify\_intra\_with\_index

For FR2,

Klayer1\_measurement=1,

- if all of the reference signals configured for RLM, BFD, CBD or L1-RSRP for beam reporting on any FR2 serving frequency in the same band outside measurement gap are not fully overlapped by intra-frequency SMTC occasions, or

- if all of the reference signal configured for RLM, BFD, CBD or L1-RSRP for beam reporting on any FR2 serving frequency in the same band outside measurement gap and fully-overlapped by intra-frequency SMTC occasions are not overlapped with any of the SSB symbols and the RSSI symbols, and 1 symbol before each consecutive SSB symbols and the RSSI symbols, and 1 symbol after each consecutive SSB symbols and the RSSI symbols, given that *SSB-ToMeasure* and *SS-RSSI-Measurement* are configured, where SSB symbols are indicated by the union set of *SSB-ToMeasure* from all the configured measurement objects on the same serving carrier which can be merged.and RSSI symbols are indicated by *SS-RSSI-Measurement*;

Klayer1\_measurement=1.5, otherwise.

If the above-mentioned reference signal configured for L1-RSRP measurement is aperiodic CSI-RS resource, longer cell identification delay would be expected.

If MCG DRX is in use, cell identification requirements for intra-frequency measurement in MCG specified in table 9.2.5.1-1, table 9.2.5.1-2, table 9.2.5.1-3, table 9.2.5.1-4, table 9.2.5.1-5 and table 9.2.5.1-6 shall depend on the MCG DRX cycle. If SCG DRX is in use, cell identification requirements for intra-frequency measurement in SCG specified in table 9.2.5.1-1, table 9.2.5.1-2, table 9.2.5.1-3, table 9.2.5.1-4, table 9.2.5.1-5, table 9.2.5.1-6, table 9.2.5.1-12, table 9.2.5.1-13 and table 9.2.5.1-14 shall depend on the SCG DRX cycle. Otherwise, the requirements for when DRX is not in use shall apply.

- When the target SSB is completely contained in active BWP of UE or the active downlink BWP is initial BWP, the intra-frequency measurement shall be conducted without gap and without interruption regardless of the NeedForGaps’ status reporting.

Table 9.2.5.1-1: Time period for PSS/SSS detection, (Frequency range FR1)

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | max( 600 ms, ceil( 5 x Kp) x SMTC period )Note 1 x CSSFintra |
| DRX cycle≤ 320 ms | max( 600 ms, ceil(M2 Note 2x 5 x Kp) x max(SMTC period,DRX cycle)) x CSSFintra |
| DRX cycle>320 ms | ceil(5 x Kp) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: When *highSpeedMeasFlag-r16* is not configured, M2 = 1.5; When *highSpeedMeasFlag-r16* is configured, M2 = 1.5 if SMTC periodicity > 40 ms,otherwise M2=1.  NOTE 3: When *highSpeedMeasFlag-r16* is configured, the requirements apply only to UE supporting either *measurementEnhancement-r16* or *intraNR-MeasurementEnhancement-r16* on measurements of the primary component carrier and do not apply to measurements of a secondary component carrier with active SCell.  NOTE 4: When *highSpeedMeasCA-Scell-r17* is configured and UE supports *measurementEnhancementCA-r17*, M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1. | |

Table 9.2.5.1-2: Time period for PSS/SSS detection, (Frequency range FR2)

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | max(600 ms, ceil(Mpss/sss\_sync\_w/o\_gaps x KFR x Kp x Klayer1\_measurement)x SMTC period)Note 1 x CSSFintra |
| DRX cycle≤ 320 ms | max(600 ms, ceil(1.5 x Mpss/sss\_sync\_w/o\_gaps x KFR x Kp x Klayer1\_measurement)x max(SMTC period,DRX cycle)) x CSSFintra |
| DRX cycle>320 ms | ceil(Mpss/sss\_sync\_w/o\_gaps x KFR x Kp x Klayer1\_measurement) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: KFR is a scaling factor depending on the frequency range and the SSB SCS. For FR2-1, KFR = 1. For FR2-2: KFR = 1 if the SCS of the SSB of the cell being detected is 120 kHz, KFR = 2 if the SCS of the SSB of the cell being detected is 480 kHz, and KFR = 3 if the SCS of the SSB of the cell being detected is 960 kHz. | |

Table 9.2.5.1-3: Time period for time index detection (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra |
| No DRX | max(120 ms, ceil( 3 x Kp )x SMTC period)Note 1 x CSSFintra |
| DRX cycle≤ 320 ms | max(120 ms, ceil (M2 Note 2 x 3 x Kp) x max(SMTC period,DRX cycle)) x CSSFintra |
| DRX cycle>320 ms | Ceil(3 x Kp) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: When *highSpeedMeasFlag-r16* is not configured, M2 = 1.5; When *highSpeedMeasFlag-r16* is configured, M2 = 1.5 if SMTC periodicity > 40 ms,otherwise M2=1  NOTE 3: When *highSpeedMeasFlag-r16* is configured, the requirements apply only to UE supporting either *measurementEnhancement-r16* or *intraNR-MeasurementEnhancement-r16* on measurements of the primary component carrier and do not apply to measurements of a secondary component carrier with active SCell.  NOTE 4: When *highSpeedMeasCA-Scell-r17* is configured and UE supports *measurementEnhancementCA-r17*, M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1 | |

Table 9.2.5.1-4: Time period for PSS/SSS detection, CC with deactivated SCell (FR1)

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | Ceil(5 x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(5 x Kp) x max(measCycleSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(5 x Kp) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: The requirements also apply to CC with deactivated SCell in SCG.  NOTE 2：The requirements also apply to CC with deactivated SDL SCell when UE supports *LB CA via switching*. | |

Table 9.2.5.1-5: Time period for PSS/SSS detection, CC with deactivated SCell (FR2)

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | Ceil(Mpss/sss\_sync\_w/o\_gaps x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(Mpss/sss\_sync\_w/o\_gaps x Kp) x max(measCycleSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(Mpss/sss\_sync\_w/o\_gaps x Kp) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: The requirements also apply to CC with deactivated SCell in SCG. | |

Table 9.2.5.1-6: Time period for time index detection, CC with deactivated SCell (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra |
| No DRX | Ceil(3 x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(3 x Kp) x max(measCycleSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(3 x Kp) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: The requirements also apply to CC with deactivated SCell in SCG.  NOTE 2：The requirements also apply to CC with deactivated SDL SCell when UE supports *LB CA via switching*. | |

Table 9.2.5.1-7: Void

Table 9.2.5.1-8: Void

Table 9.2.5.1-9: Time period for PSS/SSS detection, CC with deactivated SCell (FR1), when *highSpeedMeasCA-Scell-r17* is configured

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | Ceil(5 x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(5 x Kp) x max(measCycleSCell, M2 Note 1xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(5 x Kp) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1 | |

Table 9.2.5.1-10: Time period for time index detection, CC with deactivated SCell (FR1)，when *highSpeedMeasCA-Scell-r17* is configured

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra |
| No DRX | Ceil(3 x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(3 x Kp) x max(measCycleSCell, M2 Note 1xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(3 x Kp)x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1 | |

Table 9.2.5.1-11: Time period for PSS/SSS detection when *highSpeedMeasFlagFR2-r17* is configured, (FR2) when SMTC period ≤ 40ms

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | max(600 ms, ceil(M1Note 2 x Kp x Klayer1\_measurement)x SMTC period)Note 1 x CSSFintra |
| DRX cycle≤ 80 ms | max(600 ms, ceil(M1Note 2 x Kp x Klayer1\_measurement)x max(SMTC period,DRX cycle)) x CSSFintra |
| 80 ms< DRX cycle≤ 320 ms | ceil(1.5x Mpss/sss\_sync\_w/o\_gaps Note 3 x Kp x Klayer1\_measurement)x max(SMTC period,DRX cycle) x CSSFintra |
| DRX cycle>320 ms | ceil(Mpss/sss\_sync\_w/o\_gaps Note 3 x Kp x Klayer1\_measurement) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: For UE supporting power class 6, M1= 6 if *highSpeedMeasFlagFR2-r17* = set1 or M1= 18 if *highSpeedMeasFlagFR2-r17* = set2  NOTE 3: Void | |

Table 9.2.5.1-12: Time period for PSS/SSS detection, CC with deactivated PSCell (FR1)

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | Ceil(5 x Kp) x measCyclePSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(5 x Kp) x max(measCyclePSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(5 x Kp) x max(measCyclePSCell, DRX cycle) x CSSFintra |

Table 9.2.5.1-13: Time period for PSS/SSS detection, CC with deactivated PSCell (FR2)

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | Ceil(Mpss/sss\_sync\_w/o\_gaps x Kp) x measCyclePSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(Mpss/sss\_sync\_w/o\_gaps x Kp) x max(measCyclePSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(Mpss/sss\_sync\_w/o\_gaps x Kp) x max(measCyclePSCell, DRX cycle) x CSSFintra |

Table 9.2.5.1-14: Time period for time index detection, CC with deactivated PSCell (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra |
| No DRX | Ceil(3 x Kp) x measCyclePSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(3 x Kp) x max(measCyclePSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(3 x Kp) x max(measCyclePSCell, DRX cycle) x CSSFintra |

Table 9.2.5.1-15: Time period for time index detection (Frequency range FR2-2)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra |
| No DRX | max(200 ms, ceil(MSSB\_index\_intra x Kp x SMTC period) x CSSFintra |
| DRX cycle≤ 320 ms | max(200 ms, ceil(1.5 x MSSB\_index\_intra x Kp) x max(SMTC period, DRX cycle) x CSSFintra) |
| DRX cycle>320 ms | Ceil(MSSB\_index\_intra x Kp )x DRX cycle x CSSFintra |

Table 9.2.5.1-16: Void

Table 9.2.5.1-17: Time period for PSS/SSS detection for UE indicating *no-gap-with-interruption*, (Frequency range FR1)

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | max( 600 ms, 5 x max (80 ms, SMTC period ))Note 1 x CSSFintra |
| [DRX cycle≤ 320 ms] | max( 600 ms, ceil(M2 Note 2x 5) x [max(80 ms, SMTC period,DRX cycle)]) x CSSFintra |
| [DRX cycle>320 ms] | 5 x [DRX cycle x] CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: When *highSpeedMeasFlag-r16* is not configured, M2 = 1.5; When *highSpeedMeasFlag-r16* is configured, M2 = 1.5 if SMTC periodicity > 40 ms;,otherwise M2=1.  NOTE 3: When *highSpeedMeasFlag-r16* is configured, the requirements apply only to UE supporting either *measurementEnhancement-r16* or *intraNR-MeasurementEnhancement-r16* on measurements of the primary component carrier and do not apply to measurements of a secondary component carrier with active SCell.  NOTE 4: When *highSpeedMeasCA-Scell-r17* is configured and UE supports *measurementEnhancementCA-r17*, M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1.  NOTE 5: Requirements only apply when measurement gap is not configured, or measurement gap is fully non-overlapped with SMTC on any carrier on which UE indicates *no-gap-with-interruption*. | |

Table 9.2.5.1-18: Time period for PSS/SSS detection for UE indicating *no-gap-with-interruption*, (Frequency range FR2)

|  |  |
| --- | --- |
| DRX cycle | TPSS/SSS\_sync\_intra |
| No DRX | max(600 ms, ceil(Mpss/sss\_sync\_w/o\_gaps x KFR x Klayer1\_measurement)x max (80 ms, SMTC period ))Note 1 x CSSFintra |
| [DRX cycle≤ 320 ms] | max(600 ms, ceil(1.5 x Mpss/sss\_sync\_w/o\_gaps x KFR x Klayer1\_measurement)x [max(80 ms, SMTC period,DRX cycle)]) x CSSFintra |
| [DRX cycle>320 ms] | [ceil(Mpss/sss\_sync\_w/o\_gaps x KFR x Klayer1\_measurement) x DRX cycle] x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: KFR is a scaling factor depending on the frequency range and the SSB SCS. For FR2-1, KFR = 1.  NOTE 3: Requirements only apply when measurement gap is not configured, or measurement gap is fully non-overlapped with SMTC on any carrier on which UE indicates *no-gap-with-interruption*. | |

Table 9.2.5.1-19: Time period for time index detection for UE indicating *no-gap-with-interruption* (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra |
| No DRX | max(120 ms, 3x max (80 ms, SMTC period ))Note 1 x CSSFintra |
| [DRX cycle≤ 320 ms] | max(120 ms, ceil (M2 Note 2 x 3) x [max(80 ms, SMTC period,DRX cycle)]) x CSSFintra |
| [DRX cycle>320 ms] | 3 x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: When *highSpeedMeasFlag-r16* is not configured, M2 = 1.5; When *highSpeedMeasFlag-r16* is configured, M2 = 1.5 if SMTC periodicity > 40 ms;,otherwise M2=1  NOTE 3: When *highSpeedMeasFlag-r16* is configured, the requirements apply only to UE supporting either *measurementEnhancement-r16* or *intraNR-MeasurementEnhancement-r16* on measurements of the primary component carrier and do not apply to measurements of a secondary component carrier with active SCell.  NOTE 4: When *highSpeedMeasCA-Scell-r17* is configured and UE supports *measurementEnhancementCA-r17*, M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1  NOTE 5: Requirements only apply when measurement gap is not configured, or measurement gap is fully non-overlapped with SMTC on any carrier on which UE indicates *no-gap-with-interruption*. | |

Editor’s note: RAN4 has to decide the UE behaviour when DRX is condifured whether interruptions are allowed.

Table 9.2.5.1-20: Void

Table 9.2.5.1-21: Void

Table 9.2.5.1-22: Void

Table 9.2.5.1-23: Time period for time index detection for a UE operating on a target cell with 12 PRB SSB (Frequency range FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra\_less\_than\_5Mhz |
| No DRX | max(120ms, ceil(7 x Kp) x SMTC period) x CSSFintra |
| DRX cycle≤ 320 ms | max(120ms, ceil(M2 x 7 x Kp) x max(SMTC period,DRX cycle)) x CSSFintra |
| DRX cycle>320 ms | ceil(7 x Kp) x DRX cycle x CSSFintra |
| NOTE 1: When *highSpeedMeasFlag-r16* is not configured, M2 = 1.5; When *highSpeedMeasFlag-r16* is configured, M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1.  NOTE 2: When *highSpeedMeasFlag-r16* is configured, the requirements apply only to UE supporting either *measurementEnhancement-r16* or *intraNR-MeasurementEnhancement-r16* on measurements of the primary component carrier and do not apply to measurements of a secondary component carrier with active SCell.  NOTE 3: When *highSpeedMeasCA-Scell-r17* is configured and UE supports *measurementEnhancementCA-r17*, M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1. | |

Table 9.2.5.1-24: Time period for time index detection for a UE operating on a target cell with 12PRB SSB, deactivated SCell (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra\_less\_than\_5MHz |
| No DRX | Ceil(7 x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320ms | Ceil(7 x Kp) x max(measCycleSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320ms | Ceil(7 x Kp) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: The requirements also apply to deactivated SCG SCell. | |

Table 9.2.5.1-24a: Time period for time index detection for a UE operating on a target cell with 12PRB SSB, deactivated SCell (FR1), when *highSpeedMeasCA-Scell-r17* is configured

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra\_less\_than\_5MHz |
| No DRX | Ceil(7 x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320ms | Ceil(7 x Kp) x max(measCycleSCell, M2 Note 1xDRX cycle) x CSSFintra |
| DRX cycle> 320ms | Ceil(7 x Kp) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: M2 = 1.5 if SMTC periodicity > 40 ms; otherwise M2=1 | |

Table 9.2.5.1-25: Time period for time index detection for a UE operating on a target cell with 12PRB SSB, deactivated PSCell (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_time\_index\_intra\_less\_than\_5MHz |
| No DRX | Ceil(7 x Kp) x measCyclePSCell x CSSFintra |
| DRX cycle≤ 320ms | Ceil(7 x Kp) x max(measCyclePSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320ms | Ceil(7 x Kp) x max(measCyclePSCell, DRX cycle) x CSSFintra |

#### 9.2.5.2 Measurement period

The measurement period for intra-frequency measurements without gaps is as shown in table 9.2.5.2-1, 9.2.5.2-2, 9.2.5.2-3 (CC with deactivated SCell), 9.2.5.2-4 (CC with deactivated SCell), 9.2.5.2-8 (deactivated SCG applicable for PSCell) or 9.2.5.2-9 (deactivated SCG applicable for PSCell). When *highSpeedMeasFlag-r16* is configured, TSSB\_measurement\_period\_intra is specified in table 9.2.5.2-5. When UE *highSpeedMeasFlagFR2-r17* is configured, if SMTC ≤ 40ms, TSSB\_measurement\_period\_intra is given in table 9.2.5.2-7; otherwise, TSSB\_measurement\_period\_intra is given in table 9.2.5.2-2. For power class 6 UE supporting *measEnhCAInterFreqFR2-r18* when *highSpeedMeasFlagFR2-r17* is configured, the TSSB\_measurement\_period\_intra is given in table 9.2.5.2-7 (if SMTC ≤ 40ms) and table 9.2.5.2-2 (if SMTC > 40ms) shall apply for SCC.

If the higher layer signaling in TS 38.331 [2] signalling of *smtc2* is present and smtc1 is fully overlapping with measurement gaps and *smtc2* is partially overlapping with measurement gaps, requirements are not specified for TSSB\_measurement\_period\_intra

For a UE that supports Pre-MG, an SMTC occasion is only considered to be overlapped by Pre-MG if the Pre-MG is activated.

If MCG DRX is in use, measurement period requirements for intra-frequency measurement in MCG specified in table 9.2.5.2-1, table 9.2.5.2-2, table 9.2.5.2-3 and table 9.2.5.2-4 shall depend on the MCG DRX cycle. If SCG DRX is in use, measurement period requirements for intra-frequency measurement in SCG specified in table 9.2.5.2-1, table 9.2.5.2-2, table 9.2.5.2-3, table 9.2.5.2-4, table 9.2.5.2-8 and table 9.2.5.2-9, shall depend on the SCG DRX cycle. Otherwise, the requirements for when DRX is not in use shall apply.

For FR2, a longer measurement period is allowed, if aperiodic CSI-RS resource is measured for L1-RSRP measurement on any FR2 serving frequency in the same band, and the CSI-RS resource is outside measurement gap and overlapped with any of the SSB symbols and the RSSI symbols, and 1 symbol before each consecutive SSB symbols and the RSSI symbols, and 1 symbol after each consecutive SSB symbols and the RSSI symbols. If *SSB-ToMeasure* or *SS-RSSI-Measurement* is configured, the SSB symbols are indicated by the union set of *SSB-ToMeasure* from all the configured measurement objects on the same band which can be merged and the RSSI symbols are indicated by *SS-RSSI-Measurement*.

Table 9.2.5.2-1: Measurement period for intra-frequency measurements without gaps (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | max(200 ms, ceil( 5 x Kp) x SMTC period)Note 1 x CSSFintra |
| DRX cycle≤ 320 ms | max(200 ms, ceil(1.5x 5 x Kp) x max(SMTC period,DRX cycle)) x CSSFintra |
| DRX cycle>320 ms | ceil( 5 x Kp ) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified | |

Table 9.2.5.2-2: Measurement period for intra-frequency measurements without gaps (FR2)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | max(400 ms, ceil(Mmeas\_period\_w/o\_gaps x Kp x Klayer1\_measurement) x SMTC period)Note 1 x CSSFintra |
| DRX cycle≤ 320 ms | max(400 ms, ceil(1.5x Mmeas\_period\_w/o\_gaps x Kp x Klayer1\_measurement) x max(SMTC period,DRX cycle)) x CSSFintra |
| DRX cycle>320 ms | ceil(Mmeas\_period\_w/o\_gaps xKp x Klayer1\_measurement ) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified | |

Table 9.2.5.2-3: Measurement period for intra-frequency measurements without gaps (CC with deactivated SCell) (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | Ceil(5 x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(5 x Kp) x max(measCycleSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(5 x Kp) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: The requirements also apply to CC with deactivated SCell in SCG  NOTE 2：The requirements also apply to CC with deactivated SDL SCell when UE supports *LB CA via switching*. | |

Table 9.2.5.2-4: Measurement period for intra-frequency measurements without gaps (CC with deactivated SCell) (FR2)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | Ceil(Mmeas\_period\_w/o\_gaps x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(Mmeas\_period\_w/o\_gaps x Kp) x max(measCycleSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(Mmeas\_period\_w/o\_gaps x Kp) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: The requirements also apply to CC with deactivated SCell in SCG. | |

Table 9.2.5.2-5: TSSB\_measurement\_period\_intra When *highSpeedMeasFlag-r16* and/or highSpeedMeasCA-Scell-r17 is configured (Frequency range FR1

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX Note 2 | max(200 ms, ceil( 5 x Kp) x SMTC period)Note 1 x CSSFintra |
| DRX cycle≤ 160 ms | max(200 ms, ceil(5 x M2 Note 2 x Kp) x max(SMTC period,DRX cycle)) x CSSFintra |
| 160 ms < DRX cycle≤ 320 ms | ceil(4 x M2 Note 2 x Kp) x DRX cycle x CSSFintra |
| DRX cycle>320 ms | ceil( Y Note 3 x Kp ) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: M2 = 1.5 if SMTC period > 40 ms, otherwise M2=1  NOTE 3: Y=3 when SMTC period ≤ 40ms, Y=5 when SMTC period > 40ms  NOTE 4: When *highSpeedMeasFlag-r16* is configured, the requirements apply only to UE supporting either *measurementEnhancement-r16* or *intraNR-MeasurementEnhancement-r16* on measurements of the primary component carrier and do not apply to measurements of a secondary component carrier with active SCell.  NOTE 5: When highSpeedMeasCA-Scell-r17 is configured, the requirements apply to measurements of secondary component carrier with active SCell. | |

Table 9.2.5.2-6: Measurement period for intra-frequency measurements without gaps (deactivated SCell) (FR1), when highSpeedMeasCA-Scell-r17 is configured

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | ceil( 5 x Kp) x measCycleSCell x CSSFintra |
| DRX cycle≤ 160 ms | ceil(5 x Kp) x max(measCycleSCell, M2 Note 1 x DRX cycle) x CSSFintra |
| 160 ms < DRX cycle≤ 320 ms | ceil(4 x Kp) x max(measCycleSCell, M2 Note 1 x DRX cycle) |
| DRX cycle>320 ms | ceil( Y Note 2 x Kp ) x max(measCycleSCell, DRX cycle) x CSSFintra |
| NOTE 1: M2 = 1.5 if SMTC periodicity > 40 ms, otherwise M2=1  NOTE 2: Y=3 when SMTC <= 40 ms, Y=5 when SMTC > 40 ms | |

Table 9.2.5.2-7: Measurement period for intra-frequency measurements without gaps when *highSpeedMeasFlagFR2-r17* is configured (FR2) when SMTC period <= 40 ms

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | max(400 ms, ceil(M1Note 2 x Kp x Klayer1\_measurement) x SMTC period)Note 1 x CSSFintra |
| DRX cycle≤ 80 ms | max(400 ms, ceil(M1Note 2 x Kp x Klayer1\_measurement) x max(SMTC period,DRX cycle)) x CSSFintra |
| 80 ms< DRX cycle≤ 320 ms | ceil(1.5x Mmeas\_period\_w/o\_gaps Note 3 x Kp x Klayer1\_measurement) x max(SMTC period,DRX cycle) x CSSFintra |
| DRX cycle>320 ms | ceil(Mmeas\_period\_w/o\_gaps Note 3 xKp x Klayer1\_measurement ) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: For UE supporting power class 6, M1= 6 if *highSpeedMeasFlagFR2-r17* = set1 or M1= 18 if *highSpeedMeasFlagFR2-r17* = set2 | |

Table 9.2.5.2-8 Measurement period for intra-frequency measurements without gaps (deactivated SCG applicable for PSCell) (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | Ceil(5 x Kp) x measCyclePSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(5 x Kp) x max(measCyclePSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(5 x Kp) x max(measCyclePSCell, DRX cycle) x CSSFintra |

**Table 9.2.5.2-9: Measurement period for intra-frequency measurements without gaps (deactivated SCG applicable for PSCell) (FR2)**

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | Ceil(Mmeas\_period\_w/o\_gaps x Kp) x measCyclePSCell x CSSFintra |
| DRX cycle≤ 320 ms | Ceil(Mmeas\_period\_w/o\_gaps x Kp) x max(measCyclePSCell, 1.5xDRX cycle) x CSSFintra |
| DRX cycle> 320 ms | Ceil(Mmeas\_period\_w/o\_gaps x Kp) x max(measCyclePSCell, DRX cycle) x CSSFintra |

Table 9.2.5.2-10: Measurement period for intra-frequency measurements without gaps for UE indicating *no-gap-with-interruption* (FR1)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | max(200 ms, 5 x (80 ms, SMTC period ))Note 1 x CSSFintra |
| DRX cycle≤ 320 ms | max(200 ms, ceil(1.5x 5) x [max(80 ms, SMTC period,DRX cycle)]) x CSSFintra |
| DRX cycle>320 ms | 5 x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: Requirements only apply when measurement gap is not configured, or measurement gap is fully non-overlapped with SMTC on any carrier on which UE indicates ‘*no-gap-with-interruption*’ via *NeedForInterruptionInfoNR-r18*. | |

Table 9.2.5.2-11: Measurement period for intra-frequency measurements without gaps for UE indicating *no-gap-with-interruption* (FR2)

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX | max(400 ms, ceil(Mmeas\_period\_w/o\_gaps x Klayer1\_measurement) x (80 ms, SMTC period ))Note 1 x CSSFintra |
| DRX cycle≤ 320 ms | max(400 ms, ceil(1.5x Mmeas\_period\_w/o\_gaps x Klayer1\_measurement) x [max(80, SMTC period,DRX cycle)]) x CSSFintra |
| DRX cycle>320 ms | ceil(Mmeas\_period\_w/o\_gaps x Klayer1\_measurement ) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: Requirements only apply when measurement gap is not configured, or measurement gap is fully non-overlapped with SMTC on any carrier on which UE indicates *no-gap-with-interruption* via *NeedForInterruptionInfoNR-r18*. | |

Table 9.2.5.2-12: T SSB\_measurement\_period\_intra When *highSpeedMeasFlag-r16* and/or *highSpeedMeasCA-Scell-r17* is configured (FR1, UE indicating *no-gap-with-interruption*

|  |  |
| --- | --- |
| DRX cycle | TSSB\_measurement\_period\_intra |
| No DRX Note 2 | max(200 ms, 5 x max(80 ms,SMTC period))Note 1 x CSSFintra |
| DRX cycle≤ 160 ms | max(200 ms, ceil(5 x M2 Note 2) x [max(80 ms, SMTC period,DRX cycle)]) x CSSFintra |
| 160 ms < DRX cycle≤ 320 ms | ceil(4 x M2 Note 2) x DRX cycle x CSSFintra |
| DRX cycle>320 ms | ceil( Y Note 3) x DRX cycle x CSSFintra |
| NOTE 1: If different SMTC periodicities are configured for different cells, the SMTC period in the requirement is the one used by the cell being identified  NOTE 2: M2 = 1.5 if SMTC period > 40 ms, otherwise M2=1  NOTE 3: Y=3 when SMTC period <= 40 ms, Y=5 when SMTC period > 40 ms  NOTE 4: When *highSpeedMeasFlag-r16* is configured, the requirements apply only to UE supporting either *measurementEnhancement-r16* or *intraNR-MeasurementEnhancement-r16* on measurements of the primary component carrier and do not apply to measurements of a secondary component carrier with active SCell.  NOTE 5: When *highSpeedMeasCA-Scell-r17* is configured, the requirements apply to measurements of secondary component carrier with active SCell.  NOTE 6: Requirements only apply when measurement gap is not configured, or measurement gap is fully non-overlapped with SMTC on any carrier on which UE indicates [no gap with interruption]. | |

Editor’s note: RAN4 has to decide the UE behaviour when DRX is condigured whether interruptions are allowed.

Table 9.2.5.2-13: Void

# <End of Change 1>