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Foreword

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

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

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where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

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

- | | |
|------------------|---|
| shall | indicates a mandatory requirement to do something |
| shall not | indicates an interdiction (prohibition) to do something |

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

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

- | | |
|-------------------|--|
| should | indicates a recommendation to do something |
| should not | indicates a recommendation not to do something |
| may | indicates permission to do something |
| need not | indicates permission not to do something |

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

- | | |
|---------------|--|
| can | indicates that something is possible |
| cannot | indicates that something is impossible |

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

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

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

In addition:

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

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

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

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1 Scope

The present document establishes the minimum RF requirements for NR User Equipment (UE) operating on frequency Range 2.

2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone"
- [3] 3GPP TS 38.101-3: "NR; User Equipment (UE) radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios"
- [4] Void
- [5] 3GPP TS 38.521-2: "NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 2: Range 2 Standalone"
- [6] Recommendation ITU-R M.1545: "Measurement uncertainty as it applies to test limits for the terrestrial component of International Mobile Telecommunications-2000"
- [7] ITU-R Recommendation SM.329-10, "Unwanted emissions in the spurious domain"
- [8] 47 CFR Part 30, "UPPER MICROWAVE FLEXIBLE USE SERVICE, §30.202 Power limits", FCC.
- [9] 3GPP TS 38.211: "NR; Physical channels and modulation".
- [10] 3GPP TS 38.213: "NR; Physical layer procedures for control".
- [11] 3GPP TS 38.215: "NR; Physical layer measurements".
- [12] 3GPP TS 38.133: "NR; Requirements for support of radio resource management".
- [13] 3GPP TS 38.331: "NR; Radio Resource Control (RRC); Protocol specification".
- [14] 3GPP TS 38.306: "NR; User Equipment (UE) radio access capabilities".
- [15] IEEE Std 149: "IEEE Standard Test Procedures for Antennas", IEEE.