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TECHNICAL SPECIFICATION

**5G;  
NR;**

**User Equipment (UE) radio transmission and reception;  
Part 1: Range 1 Standalone  
(3GPP TS 38.101-1 version 15.7.0 Release 15)**

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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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# 1 Scope

The present document establishes the minimum RF requirements for NR User Equipment (UE) operating on frequency Range 1.

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## 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 38.101-2: "NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 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] 3GPP TS 38.521-1: "NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Range 1 Standalone".
- [5] Recommendation ITU-R M.1545: "Measurement uncertainty as it applies to test limits for the terrestrial component of International Mobile Telecommunications-2000".
- [6] 3GPP TS 38.211: "NR; Physical channels and modulation".
- [7] 3GPP TS 38.331: "Radio Resource Control (RRC) protocol specification".
- [8] 3GPP TS 38.213: "NR; Physical layer procedures for control".
- [9] ITU-R Recommendation SM.329-10, "Unwanted emissions in the spurious domain".
- [10] 3GPP TS 38.214: "NR; Physical layer procedures for data".

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## 3 Definitions, symbols and abbreviations

### 3.1 Definitions

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

**Aggregated Channel Bandwidth:** The RF bandwidth in which a UE transmits and receives multiple contiguously aggregated carriers.

**Carrier aggregation:** Aggregation of two or more component carriers in order to support wider transmission bandwidths.

**Carrier aggregation band:** A set of one or more operating bands across which multiple carriers are aggregated with a specific set of technical requirements.