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Title: Communication Green Base Station Acceptance Specifications

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What are 3GPP base stations conformance standards?

Based on the 3GPP base station conformance specifications, regional standardization bodies, local regulators and network operators implement test standards according to their needs. Base stations need to pass conformance tests in the region where they will be installed before they can start operation in the field.

Do base stations need to pass conformance tests?

Base stations need to pass conformance tests in the region where they will be installed before they can start operation in the field. For base stations the 3GPP specification TS 38.141 covers transmitter and receiver characteristics of base stations as well as receiver performance under noise and fading conditions.

Why do base stations need a 5G conformance test?

Thanks to the much faster, more reliable, and near-instant connections that come with the 5G, we now see a variety of innovative and comprehensive mobile wireless communication applications every day. Base stations must now pass new conformance tests to ensure they deliver on their promises.

What is a medium range base station?

Medium Range Base Stations are characterised by requirements derived from Micro Cell scenarios with a BS to UE minimum distance along the ground equal to 5 m. Local Area Base Stations are characterised by requirements derived from Pico Cell scenarios with a BS to UE minimum distance along the ground equal to 2 m.

Several techniques have been deployed to reduce the energy consumption of the base station in what is called a green base station. This paper presents an insight into these approaches and ...

The standard information database on the official website of CarbonNewture covers international standards, domestic standards, regional standards and group standards ...

This book serves as a one-stop reference for key concepts and design techniques for energy-efficient communications and networking and provides information essential for the design of ...

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In today's 5G era, the energy efficiency (EE) of cellular base stations is crucial for sustainable communication. Recognizing this, Mobile Network Operators are actively prioritizing EE for ...

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The green base station solution involves base station system architecture, base station form, power saving technologies, and application of green technologies. Using SDR-based ...

For the first time, the mobile industry has been provided with a single document that sets shared rules for describing passive, active and hybrid base station systems, thanks to the ...

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These criteria are specified by the mobile communication standardization body 3GPP. Based on the 3GPP base station conformance specifications, regional standardization bodies, local ...

The present document establishes the minimum RF characteristics and minimum performance requirements of NR and NB-IoT operation in NR in-band Base Station (BS).

The main goal of designing green base stations is to save energy and reduce power consumption while guaranteeing user service and coverage and ensuring the base station's capability for ...

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