

5g base station circuit monitoring





Overview

How can a remote spectrum monitoring system help detect 5G interference?

A remote spectrum monitoring system (figure 2) will facilitate the identification of interference from 5G base stations. Patterns of unwanted signal activity can also be examined, providing an efficient way to characterize and locate the source of the interference problem.

What is a 5G base station conformance test?

Conformance testing is an essential part of the base station life-cycle, which requires an in-depth understanding of 3rd Generation Partnership Project (3GPP) specifications. Before a 5G new radio (NR) base station or user equipment (UE) can be released onto the market, it must pass all necessary tests.

What instruments are needed to test 5G networks?

Instruments for Accurate EIRP A handheld spectrum analyzer with sufficient bandwidth to accurately measure signals occupying 100 MHz or more, as well as enough sensitivity and low noise floor to record EIRP at realistic distances from an active base station, is necessary to test 5G networks.

What tests are performed during 5G measurements?

The following tests are generally performed during 5G measurements: Figure 1: Equipments available from Keysight Technologies for 5G measurements. References: Explore 5G measurements for User Equipment (UE) and Base Stations (BS), covering transmitter and receiver test scenarios, conformance, and network stability.

Can a 5G base station be installed at ground level?

Many 5G base stations are being deployed at existing LTE sites. Each tower has a loading factor that defines the maximum weight of the radios and antennas that can be mounted. Due to legacy hardware on the tower, the



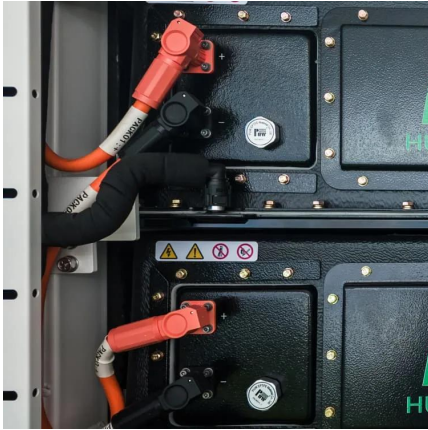
radio may be required to be installed at ground level and only the antenna is tower mounted.

Do I need to make RF measurements before a 5G base station?

It is recommended that these measurements be made before the base station is connected to the antenna system. Figure 1: The Field Master Pro MS2090A has built-in measurements to test RF cables. Many 5G base stations do not have an RF test port. For this reason, over-the-air (OTA) measurements must be made.



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To further confuse matters, 3GPP terminology often changes with each generation (e.g., a base station is called eNB in 4G and gNB in 5G). We address situations like this by using generic ...

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design, and software design of the base station
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