

Acceptance criteria for power supply introduction to base stations

What are RF requirements for a base station?

In the base station specifications, there is one set of RF requirements that is generic, applicable to what is called "general purpose" base stations. This is the original set of UTRA requirements developed in 3GPP release 99. It has no restrictions on base station output power and can be used for any deployment scenario.

How can the electronic industry reduce power requirements for base stations?

As a result, the electronic industry is exploring new methods to reduce the power requirements for the electronic equipment used in the base stations. The first approach is to make the base stations more tolerant to heat, which will then require less power for air conditioning.

What are the components of a base station?

The base station will have one or more RF antennas installed to transmit and receive RF signals from other devices. The block diagram of a base station typically includes the following key components: Baseband Processor: The baseband processor too deals with different communication protocols and interfaces with mobile network infrastructure.

What is base station Power?

Base station power refers to the output power level of base stations, which is defined by specific maximum limits (24 dBm for Local Area base stations and 20 dBm for Home base stations) and includes tolerances for deviation from declared power levels, as well as specifications for total power control dynamic range. How useful is this definition?

How much power does a base station have?

Maximum base station power is limited to 38 dBm output power for Medium-Range base stations, 24 dBm output power for Local Area base stations, and to 20 dBm for Home base stations. This power is defined per antenna and carrier, except for home base stations, where the power over all antennas (up to four) is counted.

How many transceivers does a base station have?

It consists of three part elements: one or more transceivers, several antenna mounted on a tower or building, power system, and air conditioning equipment. A base station can have between 1 and 16 transceivers, depending on geography and the demand for service of an area.

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