

SolarInnovate Energy Solutions

Single-phase power supply for mobile base station



Overview

What is a single phase power supply?

The type of AC supply where all the voltages in the system varies in a same sinusoidal pattern is called single phase power supply. It is delivered using only two wires i.e. the power wire also known as hot wire or live wire or line or phase wire and a neutral wire. The power flows between the phase and neutral wire through the load.

How does a 5G base station reduce OPEX?

This technique reduces opex by putting a base station into a “sleep mode,” with only the essentials remaining powered on. Pulse power leverages 5G base stations’ ability to analyze traffic loads. In 4G, radios are always on, even when traffic levels don’t warrant it, such as transmitting reference signals to detect users in the middle of the night.

How will mmWave based 5G affect PA & PSU designs?

Site-selection considerations also are driving changes to the PA and PSU designs. The higher the frequency, the shorter the signals travel, which means mmWave-based 5G will require a much higher density of small cells compared to 4G. Many 5G sites will also need to be close to street level, where people are.

Why are small cells being deployed on streetlights and utility poles?

Small cells are being deployed on utility poles and streetlights, which have limited space for radios and cables. Meanwhile, there are similar constraints on macro sites operating at traditional sub-6 GHz frequencies. For example, many towers are already jammed with cables where weight also affects wind load and thus antenna capacity.

How much power does a PSU need?

This is when the PSU is no longer powering the PA, which is the main power

draw, but still needs to power other electronics. The current target for low-load efficiency is about 30 W. Some OEMs would like to see that drop to nearly 10 W.

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Research on Design of Switching Power Supply Based on Mobile Base Station

Jan 1, 2016 · Keywords: Mobile Base Station, Switching Power Supply, Control Circuit Abstract: With the rapid development of mobile communication service, the construction of mobile

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