

How to design the base station power supply circuit





Overview

What are the components of a basic power supply circuit?

Now when we're talking about a basic power supply circuit there are three main components that we absolutely need to make everything work as intended. These are: The transformer is this nifty device that has two sets of windings, one is called the primary winding and the other is the secondary winding.

What makes a telecom battery pack compatible with a base station?

Compatibility and Installation Voltage Compatibility: 48V is the standard voltage for telecom base stations, so the battery pack's output voltage must align with base station equipment requirements. Modular Design: A modular structure simplifies installation, maintenance, and scalability.

What is a stabilized supply?

The design of stabilized supplies has been simplified dramatically by the introduction of voltage regulator ICs such as the L78xx and L79xx - three-terminal series regulators which provide a very stable output and include current limiter and thermal protection functions. Figures 16, 17 and 18 show how these circuits are used.

How do you protect a telecom base station?

Backup power systems in telecom base stations often operate for extended periods, making thermal management critical. Key suggestions include: Cooling System: Install fans or heat sinks inside the battery pack to ensure efficient heat dissipation.



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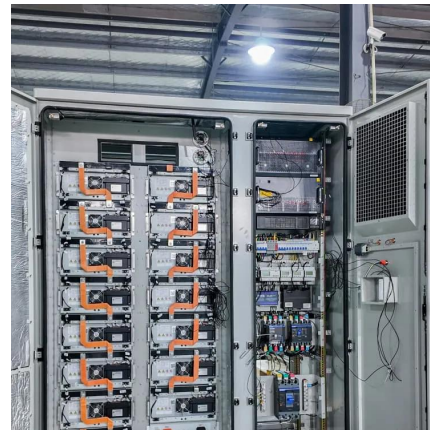


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Figure 3. A power supply for a 5G macro base station block diagram. Highlighted ICs The MAX15258 is a high voltage multiphase boost controller with an I²C digital interface designed ...



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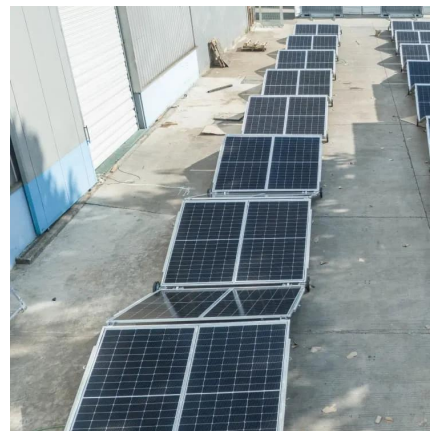
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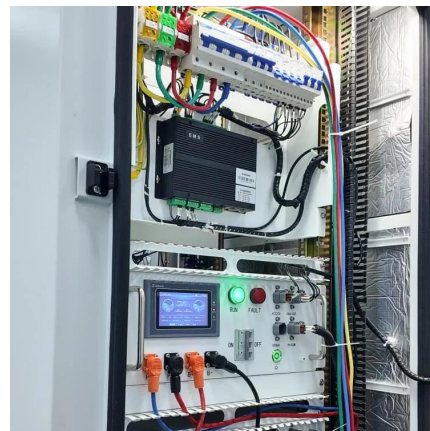


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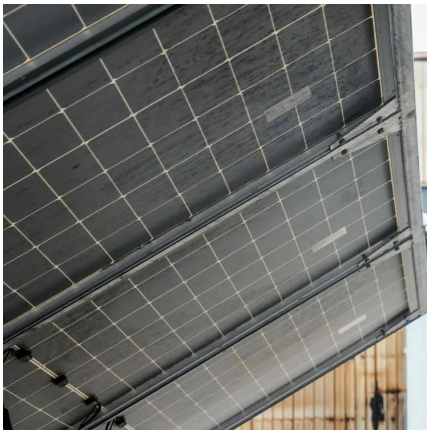
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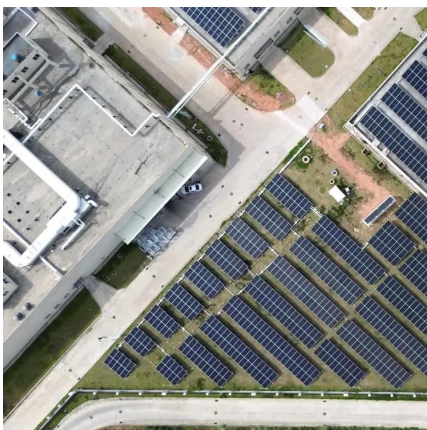


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[Base Station Power Supply , onsemi](#)

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