

# Protection voltage range of communication base station







#### **Overview**

What is a Blvd threshold for a communication base station?

Assume the rated voltage of a communication base station's battery is 48V, with the BLVD threshold set to 42V. When the mains power fails and the battery starts supplying power, the power system continuously monitors the battery voltage through the voltage detection circuit.

What is a base station power cabinet?

The base station power cabinet is a key equipment ensuring continuous power supply to base station devices, with LLVD (Load Low Voltage Disconnect) and BLVD (Battery Low Voltage Disconnect) being two important protection mechanisms in the power cabinet.

Why should a 5G base station be protected?

In addition to potential damage originating on the power line, the base stations must be sturdy to environmental electrical hazards such as lightning and electrostatic discharge (ESD) strikes. Design engineers need to protect their 5G base stations from these electrical hazards to prevent damage to the bases station and avoid critical downtime.

Why do baseband units need electrical protection?

Figure 6. Baseband Units need electrical protection at the power circuits, processors, and I/O lines. The BBU links the AAS and the wireline infrastructure, encoding transmissions and decoding received signals while processing data from calls and transmissions.

How do you support a base station when AC power is interrupted?

A backup battery (block 5) is one of the best ways to support the base station when AC power is interrupted. Support the base station by: Providing a fast-acting fuse on the battery circuit for overload protection. Monitoring battery temperature rise to ensure battery safety.



How do you support a base station?

Support the base station by: Providing a fast-acting fuse on the battery circuit for overload protection. Monitoring battery temperature rise to ensure battery safety. Placing surface mount thermistors on the battery pack modules. Protecting the battery pack modules from overcharging.



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#### Mobile Phone Base Stations EMF / Health Fact Pack

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## <u>Designing to Protect 5G Macro Base Stations for High Reliability</u>

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# Communication Base Station Voltage Regulation , Huijue Group ... As we navigate this transformation, one truth

As we navigate this transformation, one truth emerges: Effective communication base station voltage regulation isn't just about preventing outages - it's about enabling the hyperconnected ...



## How to use diodes for RF protection of cellular base stations?

For example, transient voltage suppression diodes (TVS diodes) have fast response and high energy absorption capabilities, which can quickly



limit excessive voltage within a safe range ...



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