SolarTech Power Solutions

Base station wind power supply sampling

Overview

Do base station antennas increase wind load?

Base station antennas not only add load to the towers due to their mass, but also in the form of additional dynamic loading caused by the wind. Depending on the aerodynamic efficiency of the antenna, the increased wind load can be significant. Its effects figure prominently in the design of every CommScope base station antenna.

What is wind load based on?

wind load as a function of the length-to-width ratio of the antenna. For wind loads based on win on on Base Station Antenna Standards by NGMN AllianceABOUT KATHREINKathrein is a leading internation l specialist for reliable, high- quality communication technologies.We ar.

Which wind direction should be considered in a base station antenna?

In aerospace and automotive industries, only unidirectional wind in the frontal direction is of concern. In the world of base station antennas, wind direction is unpredictable. Therefore, we must consider 360 degrees of wind load. Wind force on an object is complex, with drag force being the key component.

How do base station antennas affect tower load?

It is therefore important for wireless service providers and tower owners to understand the impact that each base station antenna has on the overall tower load. Base station antennas not only add load to the towers due to their mass, but also in the form of additional dynamic loading caused by the wind.

Do aerodynamic solutions reduce wind load in wind tunnel testing?

These aerodynamic solutions show 30 percent overall wind load reduction in wind tunnel testing, compared to the baseline design. These wind load reductions can be very critical at cell sites where tower capacity is at or near its limits.

How is wind loading determined?

In general, the wind loading of antennas is determined based on the standard EN 1991-1-4. This European standard corresponds to the German standard DIN 1055-4.

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