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The now and future of weather radar design

5 ways SSPA beats vacuum tube-based power amplifiers

Radar is critical for short-term weather forecasting, helping people prepare for storms, hurricanes and other dangerous weather conditions. Solid state power amplifier (SSPA) technology features a compact and flexible design, and its pulse compression method enables powerful performance. Based on gallium nitride (GaN) transistors, SSPA is the future of radiofrequency power generation and is now available for weather radars.

Here are five reasons why SSPA will soon become the standard in weather radar design.

Magnetron or klystron vacuum tubes

Up to 50,000 hour lifespan



Consumable components replaced every few years



Component failure can stop data collection



Requires manual calibration at regular intervals



Higher lifetime costs and maintenance



Solid state power amplifiers

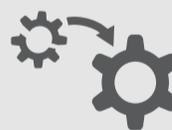
Uses GaN transistors with MTBF of more than 1,000,000 hour lifespan



Zero consumable components



Built-in redundancies for continuous operation



Automatic continuous calibration for high data quality



Lower maintenance and lifetime costs



Trusted weather observations for a sustainable future

Learn more about SSPA from the weather measurement experts.
vaisala.com/weather-radars

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