

## PolyStrata® Unlocks the Possibilities of Ultra-compact, Low-loss mmWave Packages

Imagine building high-frequency millimeter-wave systems using the same surface mount technology (SMT) as common electronic components, without compromising performance.

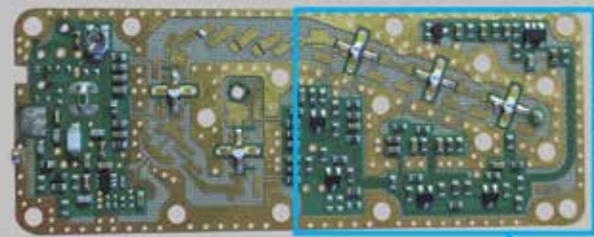
### Key Takeaways:

- **Increased first-time success rates:** SMT simplifies assembly and reduces the potential for errors compared to traditional methods like wire bonding.
- **Faster innovation cycles:** Easier component integration allows for quicker design changes and prototyping.
- **Reduced rework costs:** Lower assembly complexity minimizes the need for rework and troubleshooting.
- **Wideband performance:** These packages maintain minimal signal loss (low parasitic characteristics) up to 95 GHz, making them suitable for a wide range of mmWave applications.

### Case Study: The Nuvotronics PSP1025530\_002 delivers game-changing size reductions

Our surface mount package for the Northrop Grumman ALP302 17-21 GHz low-noise amplifier (LNA) can replace the entire chain of LNA transistors typically used in a Ka-band receive ground terminal front-end.

#### Typical Ka Band Ground Terminal Rx Front End



#### Nuvotronics PSP1025530\_002

with Northrop Grumman's ALP302 LNA

17.2-21.2 GHz

33 dB Gain

1.2 NF



**3.6x**  
SIZE REDUCTION

The following graphs illustrate the measured performance of the Northrop Grumman ALP302 LNA packaged in our innovative PolyStrata® package (PSP1025530\_002) and mounted on a standard circuit board. We compare its performance against the leading commercially available surface mount Ka-band LNA.

