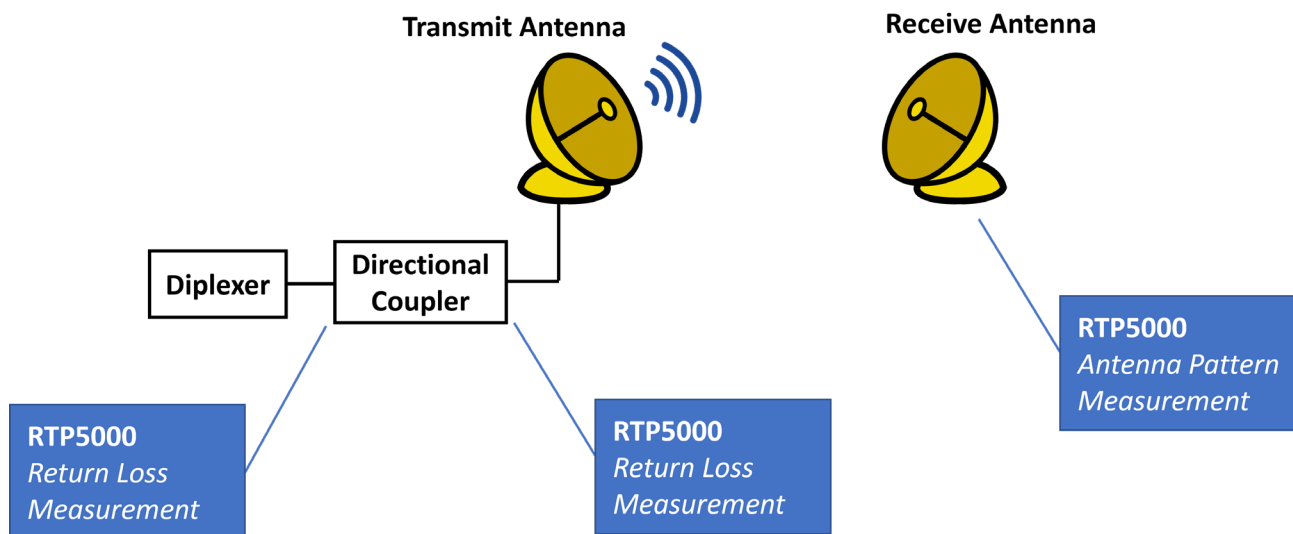


Antenna Performance Testing for Satellite Networks

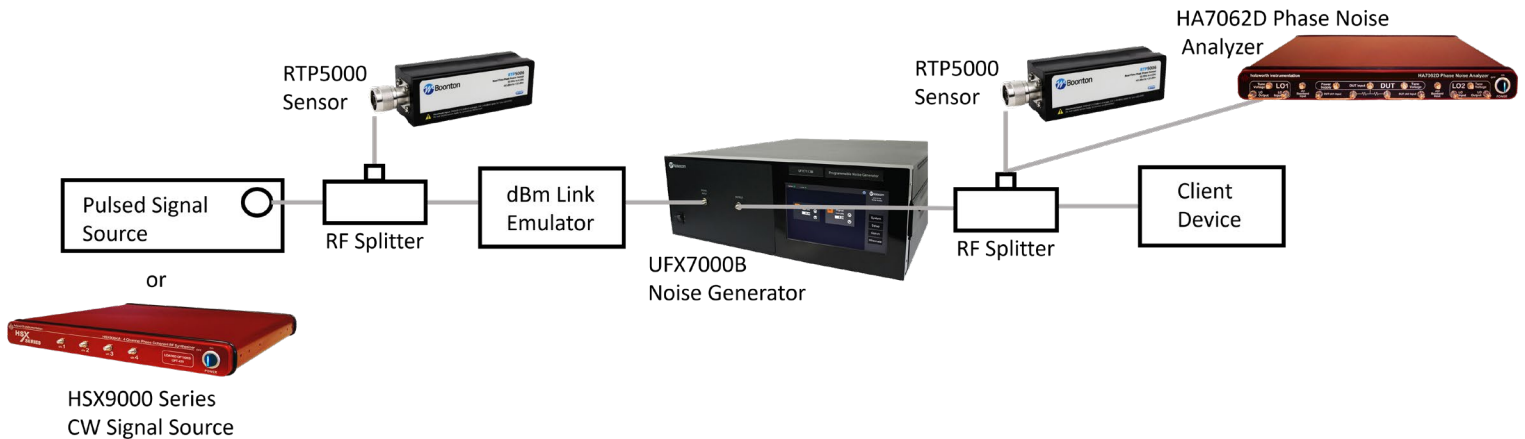
Antennas are critical components for reliably communicating information. Boonton RTP5000 Series Real-Time USB Peak Power Sensors provide a simple, convenient method to characterize antenna performance in satellite systems. Peak power sensors can monitor the incident power of a communications signal before transmission and the portion of the signal power reflected back from the antenna. Return loss is used to measure this difference between forward power and reflected power.

Antenna pattern measurements represent an antenna's radiation properties, or how it radiates/transmit energy into space. Patterns are typically three dimensional since antennas radiate energy in every direction to some degree. Antenna gain characterizes the directivity of the radiation pattern. With x, y, and z movements, RTP5000 Series sensors can determine the intensity of pulsed or CW signals that an antenna radiates in a given direction, simplifying antenna calculations and analysis.



SATELLITE 2023 Test Setup:

RTP5000 Series sensors measure the power level of the output from the signal source, which represents the signal to be transmitted into the antenna, and the return loss to calculate the actual radiated signal to the target antenna.



Product Overview:

Boonton RTP5000 Real-Time USB Peak Power Sensors:

Boonton RTP5000 Series sensors utilize Real-time Power Processing™ technology to deliver the fastest measurement rate of 100,000 measurements per second with zero latency or gaps in acquisition. Fast measurement speed makes them ideal for antenna pattern measurements.

- Accurate pulse measurements
- Industry widest video bandwidth of 195 MHz
- Fastest rise time of 3 ns
- Finest resolution of 100 ps
- Crest factor, CCDF, and statistical measurements
- Fast 100,000 measurements per second

More Resources:

Visit info.wtcom.com/satellite-2023 to learn more about T&M solutions for satellite communications from Boonton, Holzworth, and Noisecom.