

Ka-Band SATCOM Antenna

29 – 34 GHz



Product Code: KBA – 2934

Version 1.0

SPECIFICATIONS

Electrical:	
Frequency Range	29 - 34 GHz
VSWR	<1.92:1
Gain	8 dBi
Polarization	Linear
Input Impedance	50 Ohms
Connector	SMA-2.92-mm coaxial connector
Mechanical:	
Dimensions (Lx W)	23 mm x 37 mm
Weight	<120 g
Environmental	
Operating Temp	-40°C to +70°C
Storage Temp	-50°C to +100°C
Construction	Aluminum, manufactured using metal milling techniques with 20–30 µm tolerance
Environmental Rating	IP67



KBA-2934

PRODUCT DESCRIPTION:

The WaveSense KaSlot-2934 is a high-performance slot antenna designed for millimeter-wave applications in the 29 GHz to 34 GHz frequency range. Engineered with a multi-layer ridge waveguide structure, this antenna offers low insertion loss, high gain (8 dBi), and excellent impedance matching ($S_{11} < -10$ dB). The innovative pin/hole waveguide structure minimizes RF leakage while ensuring robust performance in high-frequency communication and radar systems.

PRODUCT FEATURES:

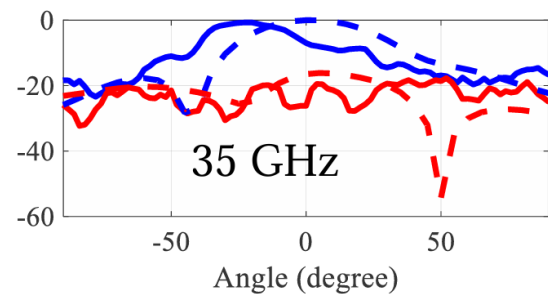
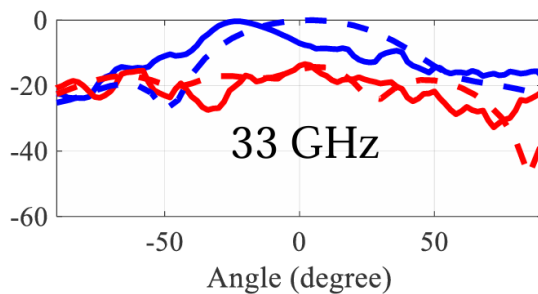
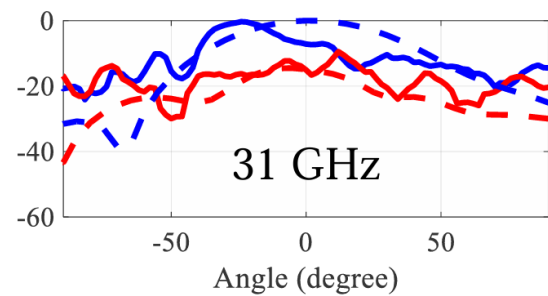
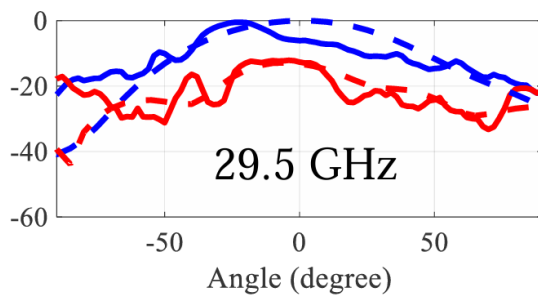
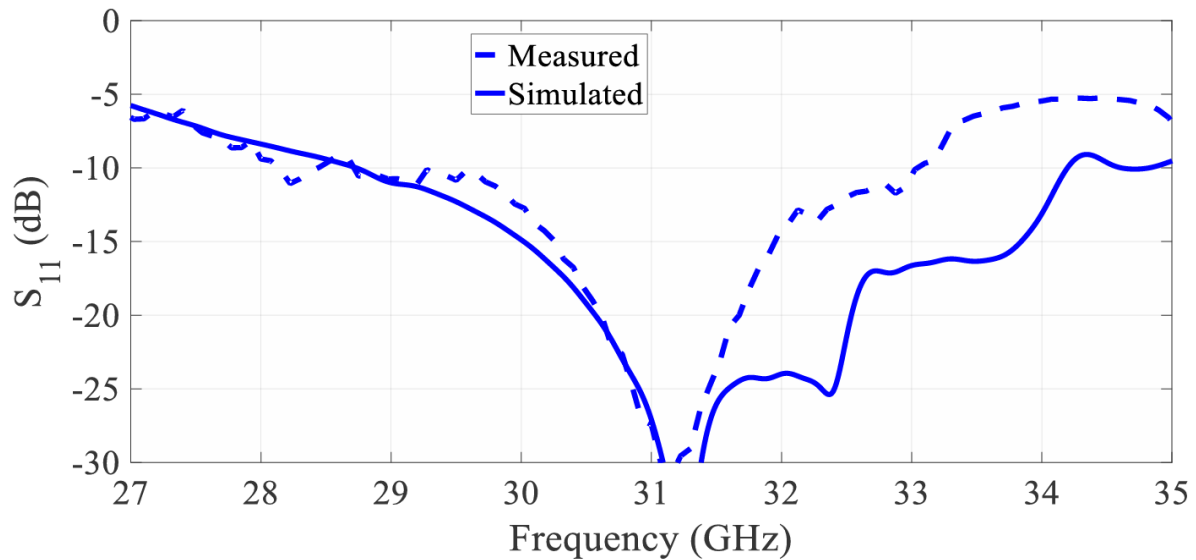
- **Broadband Operation** – 29 GHz to 34 GHz range, ideal for Ka-band.
- **High Gain** – Delivers approximately 8 dBi for enhanced signal strength.
- **Innovative Pin/Hole Waveguide Structure**.
- **Ridge Waveguide Feed** – Provides high power handling and low loss.
- **Compact & Lightweight** – 23 mm×36 mm aluminium construction for rugged performance.

APPLICATIONS:

- 🚀 **Satellite Communications (SATCOM)** – Ka-band transceivers.
- 📡 **5G and Beyond (6G) Networks** – mm-wave backhaul and high-speed wireless links.
- ✈️ **Aerospace & Defense** – Airborne, naval, and land-based radar applications.
- 🎯 **Radar Systems** – High-resolution imaging, target tracking, and SAR.

TEST CONDITIONS:

- S-parameters were measured using Anritsu MS46122B VNA.
- Farfield Radiation pattern measurements were carried out in Anechoic Chamber.



Co-pol (blue) and cross-pol (red) E-plane patterns with minimum gain of 8 dBi