# Waveguide Probes

## Dual Polarized Waveguide Probes

Lorentz offers a line of dual-linearly polarized high-performance probes covering 12.0-40.0 GHz. These probes are designed specifically for near-field antenna measurements with typical gain 9±2 dBi.

### Features

- Dual-linear polarization
- Excellent cross-polarization discrimination
- High port isolation
- Broad, stable beamwidth
- No pattern nulls in the main lobe range
- Low interaction between probe and AUT

### Solution for

- Near-field antenna measurements
- Calibration and polarization reference

### Customization services

- Custom mount options
- Precision polarization alignment unit
- Length of probe
- RF interface
- Operating frequency
- Coating color

### Applications

- 5G NR OTA testing
- Phase array testing
- Satellite antenna testing
- General antenna testing
- Radome testing
- Wireless communication

# Waveguide Probes

## Typical product specifications

| Model | ANTP02-0140S-X-131 | ANTP02-0220S-X-131 | ANTP02-0320K-X-131 |
|---|---|---|---|
| **Frequency range** | 12.0-18.0 GHz | 18.0-26.5 GHz | 26.5-40.0 GHz |
| **Polarization** | Dual linear | Dual linear | Dual linear |
| **Gain** | 9±2 dBi | 9±2 dBi | 9±2 dBi |
| **VSWR** | ≤ 1.8 | ≤ 1.8 | ≤ 1.8 |
| **Return loss** | ≤ -10.9 dB | ≤ -10.9 dB | ≤ -10.9 dB |
| **Port to port isolation** | ≥ 35 dB | ≥ 35 dB | ≥ 35 dB |
| **Cross-polar discrimination** | ≥ 30 dB | ≥ 30 dB | ≥ 30 dB |
| **Channel imbalance** | ≤ 0.5 dB | ≤ 0.5 dB | ≤ 0.5 dB |
| **RF interface** | SMA Female | SMA Female | 2.92 mm Female |
| **Impedance** | 50 Ohms | 50 Ohms | 50 Ohms |
| **Material** | Aluminum | Aluminum | Aluminum |
| **Coating color** | Blue | Blue | Blue |
| **Dimensions (A*B)** | 131*75 mm | 131*75 mm | 81*75 mm |

# Waveguide Probes
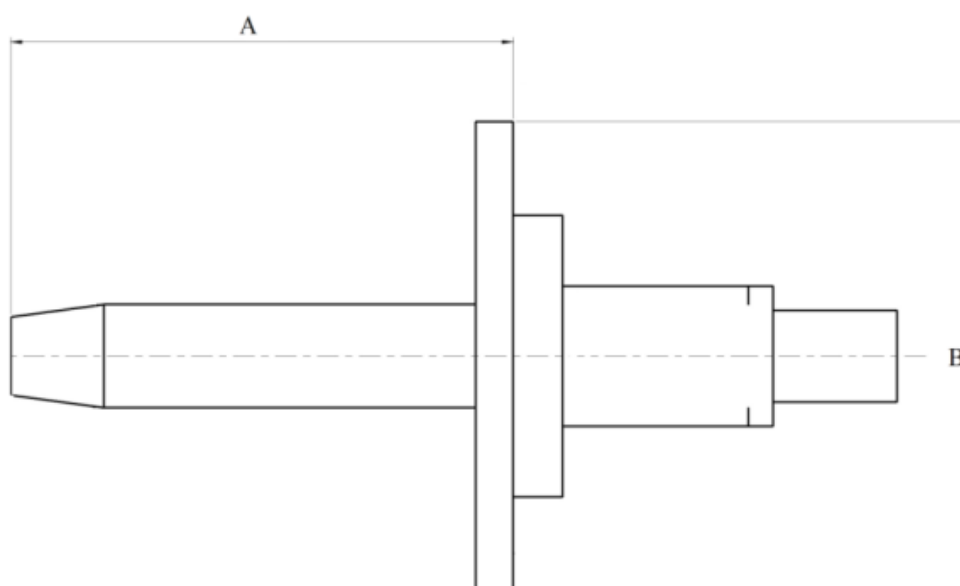
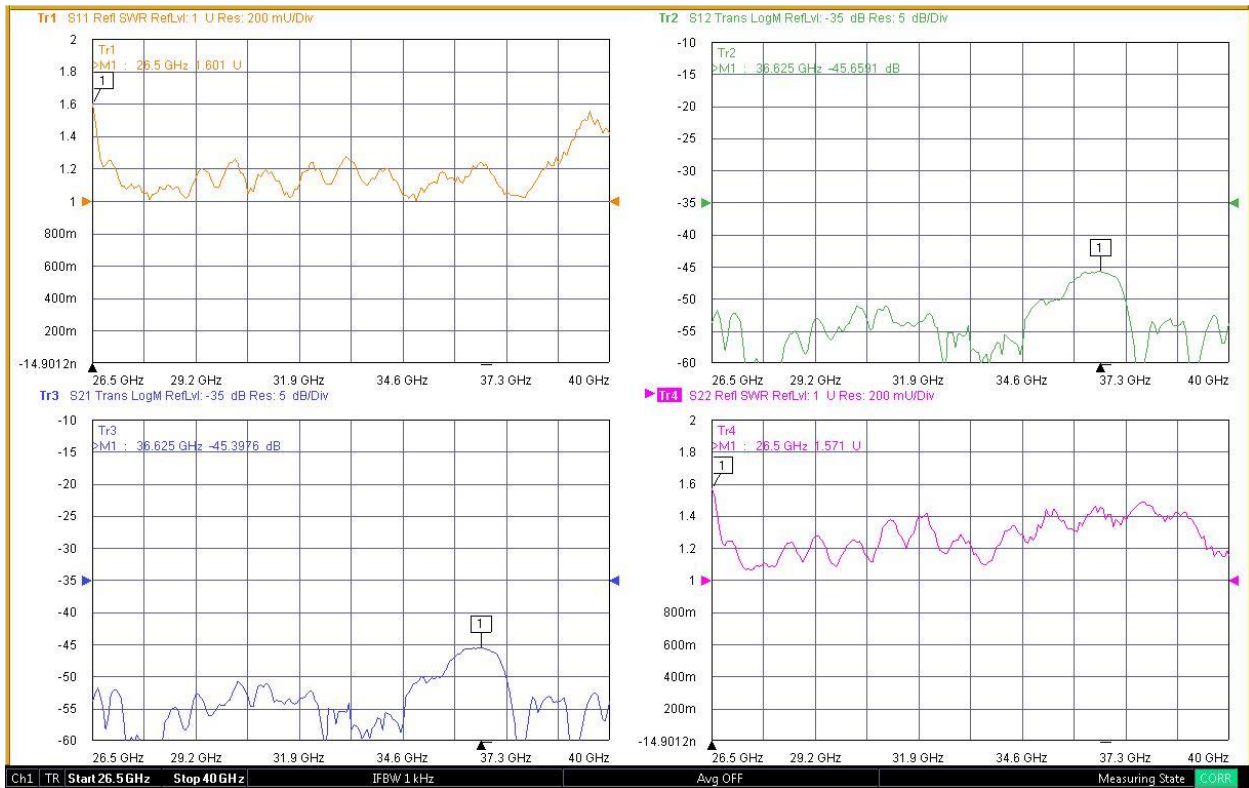## Typical measured data
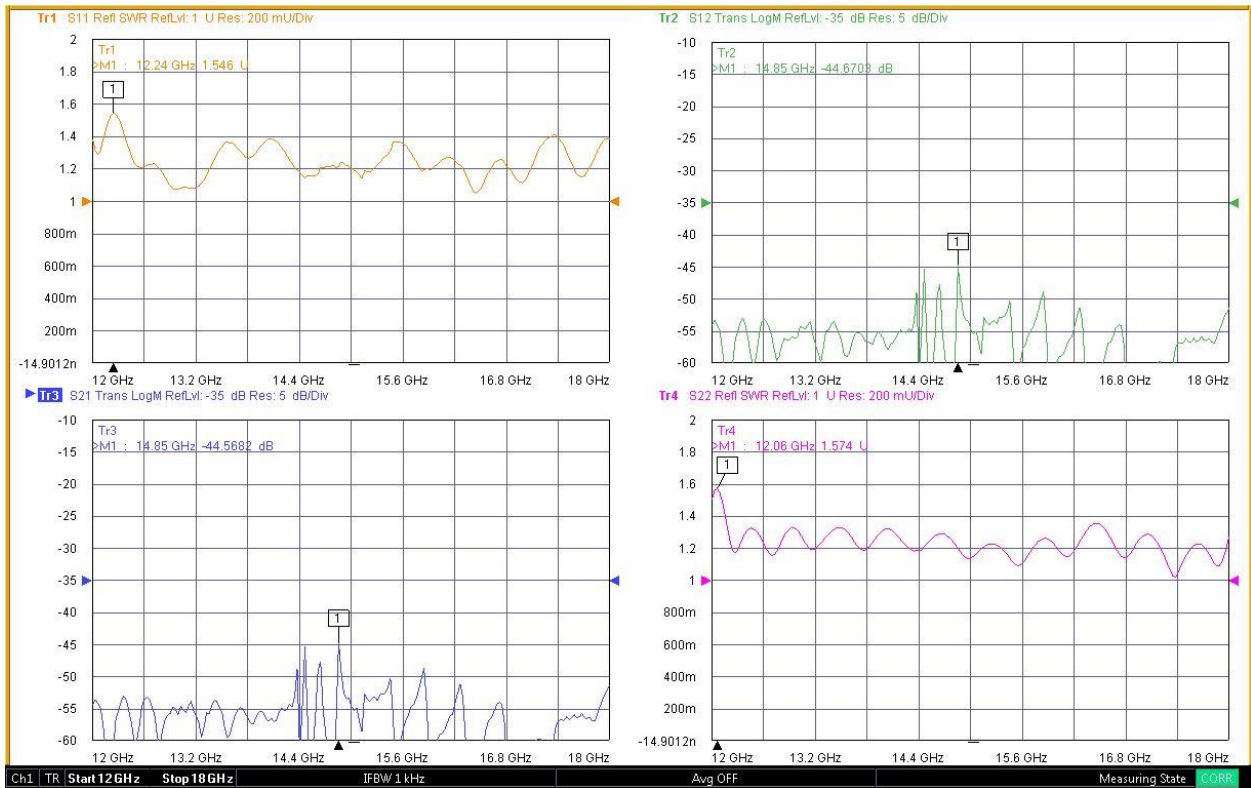


ANTP02-0140S-X-131 S-parameters
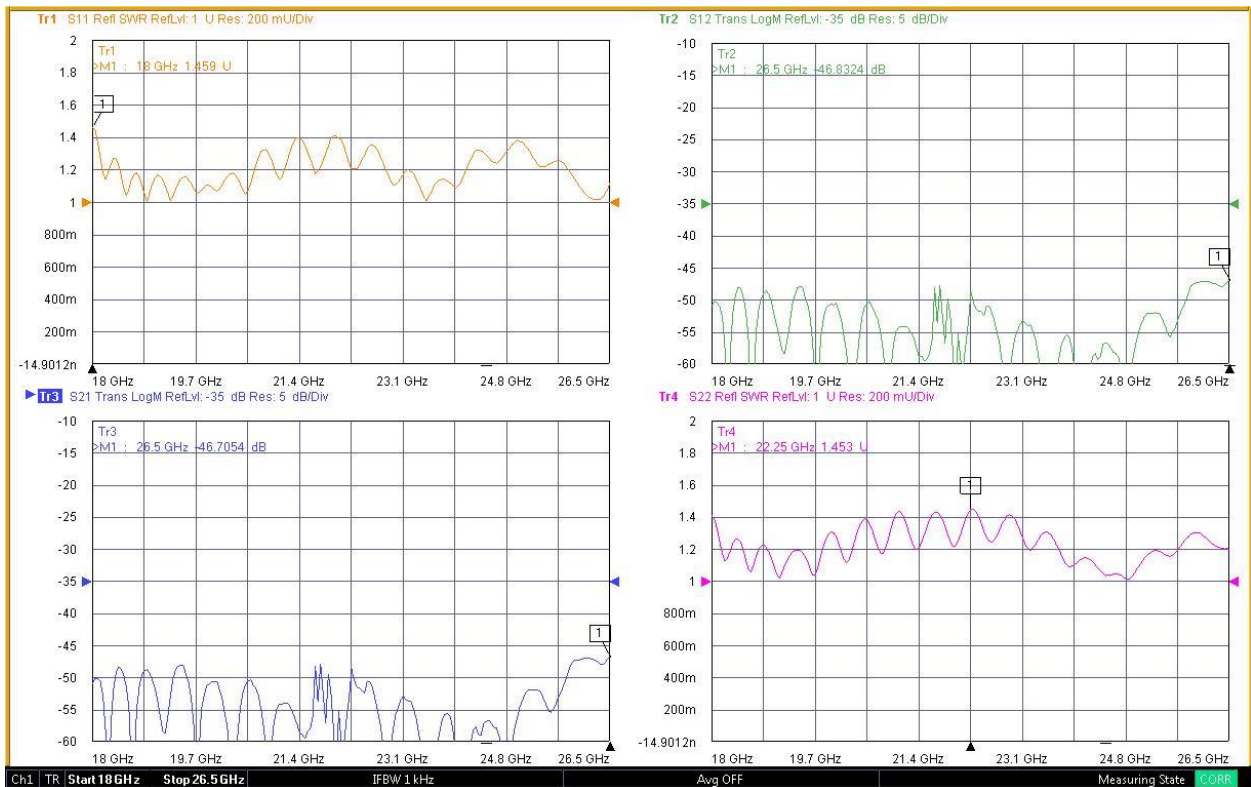


ANTP02-0220S-X-131 S-parameters
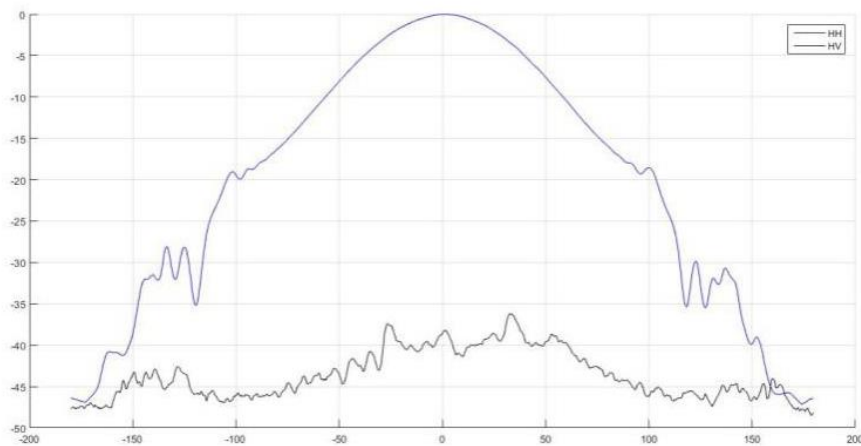
# Waveguide Probes

## Typical measured data



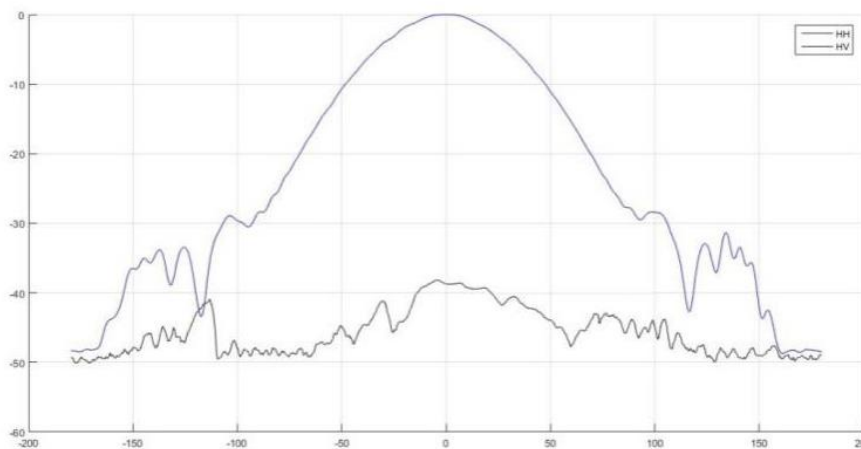ANTP02-0320S-X-131 S-parameters

The radiation pattern of probe affects its performance during testing.



Measured radiation pattern @ 12 GHz

# Waveguide Probes

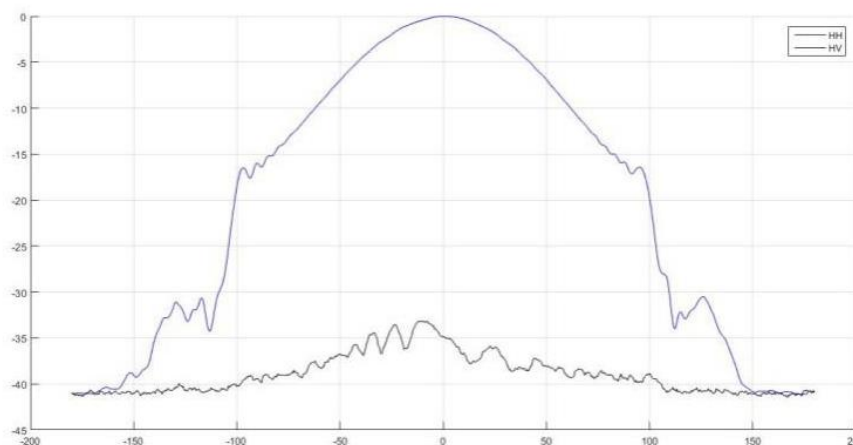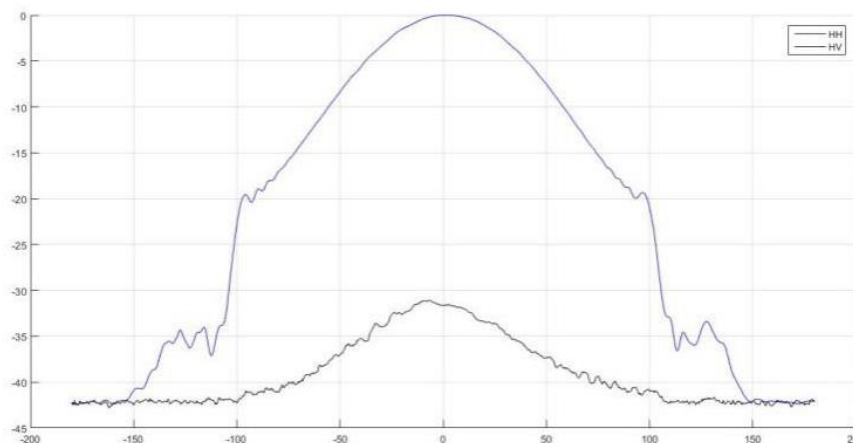## Typical measured data



Measured radiation pattern @ 18 GHz



Measured radiation pattern @ 26.5 GHz



Measured radiation pattern @ 40 GHz