

Scalar Feed Horn Antenna

From 18 to 110 GHz, 12 to 19 dBi Gain

DESCRIPTION

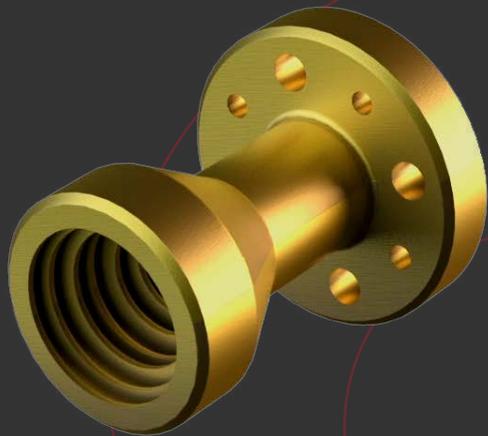
Anteral's Scalar Feed Horn Antennas (SFHA) operate at different frequency bands between 18 GHz and 110 GHz. Depending on the SFHA, the antenna offers 17 dBi, 15 dBi, and 13 dBi directivity.

The SFHA are equipped with a **circular waveguide** that supports both **linear and circular polarization**. A rectangular waveguide port configuration that only supports linear polarization is available using our circular-to-rectangular transitions (CRWT).

The **dual linear polarized option**, the Dual Polarized Scalar Feed Horn Antennas (DPSFHA), is also available using our high-performance orthomode transducers (OMT) and polarizers (POL). Besides, Anteral offers ad-hoc design service to make our products fulfill any requirement you have on mind.

APPLICATIONS

This type of horns is especially suitable for laboratory test measurements, electromagnetic measurements and gain calibration. Moreover, custom bands and gain values can be requested.

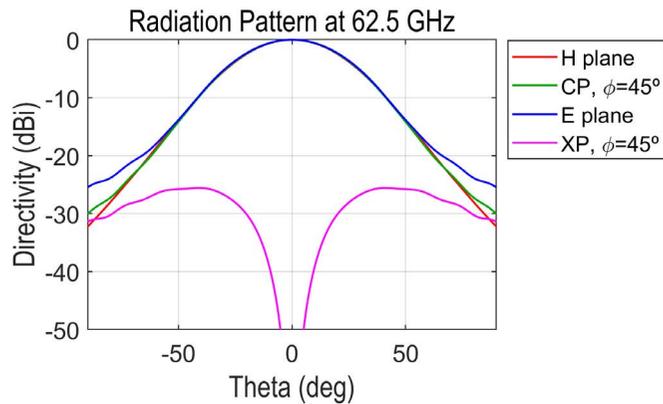
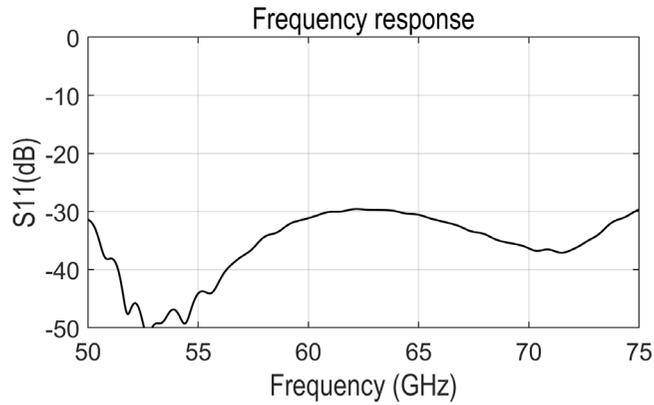


ELECTRICAL SPECIFICATIONS

| Model | Frequency (GHz) | S11 (dB) | Directivity (dBi) | 3 dB beamwidth (deg) | | Sidelobe (dB) | | XP (dB) |
|---------------|-----------------|----------|-------------------|----------------------|---------|---------------|---------|---------|
| | | | | E-Plane | H-Plane | E-Plane | H-Plane | |
| SFHA-15-WR112 | 7.05 - 10 | -23 | 15 | | | | | 25 |
| SFHA-15-WR90 | 8.2 - 12.4 | -23 | 15 | | | | | 25 |
| SFHA-15-WR75 | 10 - 15 | -23 | 15 | | | | | 25 |
| SFHA-15-WR62 | 12.4 - 18 | -23 | 15 | | | | | 25 |
| SFHA-15-WR51 | 15 - 22 | -23 | 15 | | | | | 25 |
| SFHA-12-WR42 | 18 - 26.5 | -23 | 12.3 | 43.6 | 43.6 | -26.4 | -26.4 | 30 |
| SFHA-18-WR42 | 18 - 26.5 | -23 | 19.4 | 21 | 21 | -33.6 | -33.6 | 30 |
| SFHA-12-WR28 | 26.5 - 40 | -23 | 11.7 | 46.4 | 46.4 | -25.8 | -25.8 | 25 |
| SFHA-15-WR28 | 24.5 - 43.5 | -23 | 15 | 31.8 | 31.8 | -16.3 | -16.3 | 20 |
| SFHA-18-WR28 | 26.5 - 40 | -23 | 19.4 | 21 | 21 | -33.6 | -33.6 | 30 |
| SFHA-15-WR22 | 33 - 50 | -23 | 15 | 38.2 | 38.2 | -32.1 | -32.1 | 20 |
| SFHA-17-WR19 | 40 - 60 | -23 | 16.9 | 25.8 | 25.8 | -34 | -34 | 30 |
| SFHA-13-WR19 | 40 - 60 | -23 | 12.7 | 43.2 | 43.2 | -24.9 | -24.9 | 25 |
| SFHA-17-WR15 | 50 - 75 | -23 | 17 | 26 | 26 | -36.3 | -36.3 | 30 |
| SFHA-13-WR15 | 50 - 75 | -23 | 12.5 | 45.6 | 45.6 | -24.6 | -24.6 | 25 |
| SFHA-18-WR12 | 60 - 90 | -23 | 17.9 | 22.1 | 22.1 | -26 | -26 | 30 |
| SFHA-17-WR12 | 60 - 90 | -23 | 17.2 | 26.3 | 26.3 | -36.3 | -36.3 | 30 |
| SFHA-13-WR12 | 60 - 90 | -23 | 12.6 | 43 | 43 | -25.4 | -25.4 | 25 |
| SFHA-17-WR10 | 75 - 110 | -23 | 16.9 | 26.3 | 26.3 | -35.1 | -35.1 | 30 |
| SFHA-13-WR10 | 75 - 110 | -23 | 13.2 | 39.2 | 39.2 | -25.3 | -25.3 | 25 |

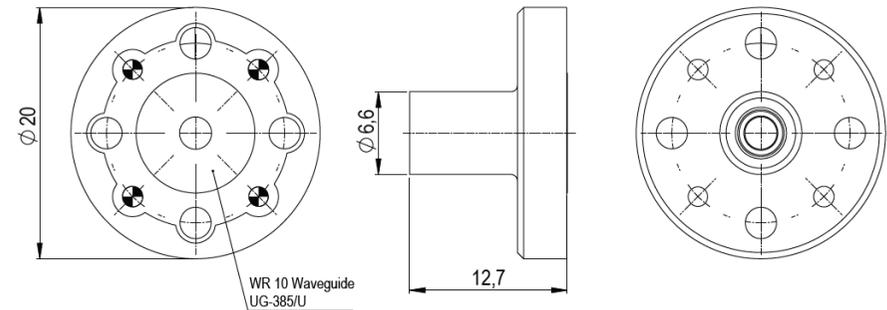
This table contains only a few SFHA examples. All data are typical values. Contact us for other SFHA and more information.

TYPICAL PERFORMANCE



MECHANICAL OUTLINE

| | |
|----------------|--------------------------------------|
| Flange | Standard UG-xxx/U |
| Fabrication | In a single aluminum piece |
| External color | Aluminum. Gold plated in some cases. |
| Material | Aluminum. |



Additional notes

All data are simulated. Actual values could vary slightly.
The return loss performance of all items is checked before delivery.

