

- High performance Standard Gain Horn.
- Standard WR input with UG-387 U/M flange except for SGH-26-WR19 (UG-383/U).
- 26dB nominal gain at center frequency.
- Specific gain values can be requested.

Description

This type of horn is suitable for laboratory test measurements, electromagnetic measurements and gain calibration. Models presented have around 26 dB gain at central frequency, but any customer requirement gain value is accepted. These antennas are equipped with the standard UG-387 U/M precision style flange, the flange is manufactured in special way to provide the most accurate and repeatable mechanical alignment possible.

Additional notes

Horn antenna exterior appearance is designed to minimize weight, improve robustness and offer an sharp aperture; but exterior appearance, flange or additional support structures if needed can be defined as customer needs.

Horn antenna is manufactured from a single aluminum rod, no soldering for flanges and no screws for attaching parts are included.

Mechanical and Electrical Specifications

| Description | |
|----------------|---|
| Flange | Standard UG-387 U/M; UG-383/U (SGH-26-WR19) |
| Fabrication | In a single aluminum piece |
| External color | Ruby Red |
| Material | Aluminum |

Table 1: Mechanical specifications of SGH antennas.

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| Model | Input waveguide | fmin [GHz] | f0 [GHz] | fmax [GHz] | Length [mm] | A [mm] | B [mm] | VSWR |
|--------------|-----------------|------------|----------|------------|-------------|--------|--------|-------|
| SGH-26-WR19 | WR-19 | 40 | 50 | 60 | 150,4 | 59,9 | 43 | <1,1 |
| SGH-26-WR15 | WR-12 | 50 | 62 | 75 | 118,4 | 47,5 | 34,2 | <1,1 |
| SGH-26-WR12 | WR-12 | 60 | 75 | 90 | 97,6 | 39,4 | 28,4 | <1,1 |
| SGH-26-WR10 | WR-10.0 | 75 | 92 | 110 | 80 | 31 | 22 | <1,1 |
| SGH-26-WR08 | WR-8.0 | 90 | 110 | 140 | 64 | 25 | 18 | <1,1 |
| SGH-26-WR06 | WR-6.5 | 110 | 140 | 170 | 52 | 20 | 14 | <1,15 |
| SGH-26-WR05 | WR-5.1 | 140 | 180 | 220 | 41 | 16 | 11 | <1,2 |
| SGH-26-WR04 | WR-4.3 | 170 | 215 | 260 | 35 | 13 | 9 | <1,2 |
| SGH-26-WR03 | WR-3.4 | 220 | 275 | 330 | 27 | 11 | 8 | <1,25 |
| SGH-26-WR2.8 | WR-2.8 | 260 | 330 | 400 | 23 | 9 | 7 | <1,3 |
| SGH-26-WR2.2 | WR-2.2 | 330 | 415 | 500 | 18 | 7 | 5 | <1,3 |

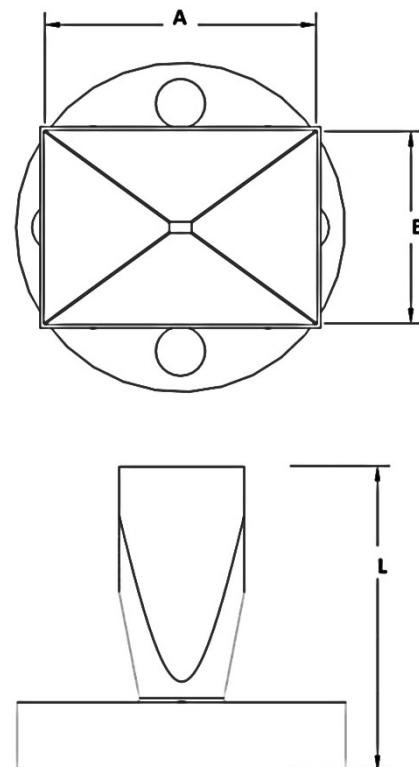
Table 2: Size and operating frequency of each antenna model.

Radiation Patterns Parameters

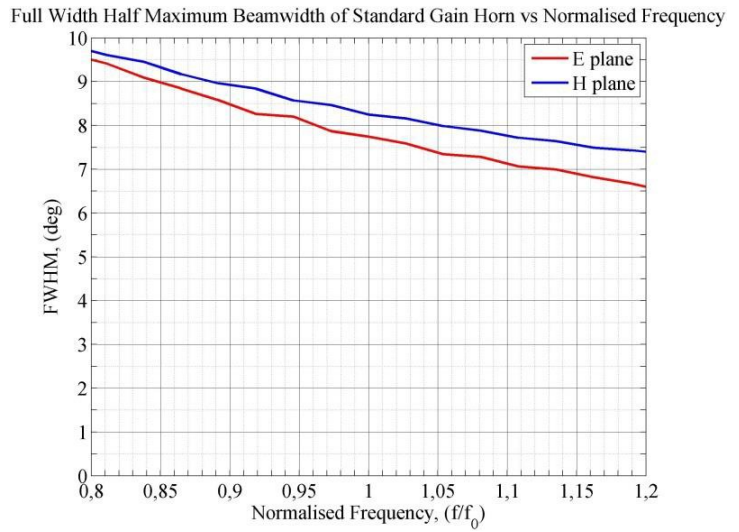
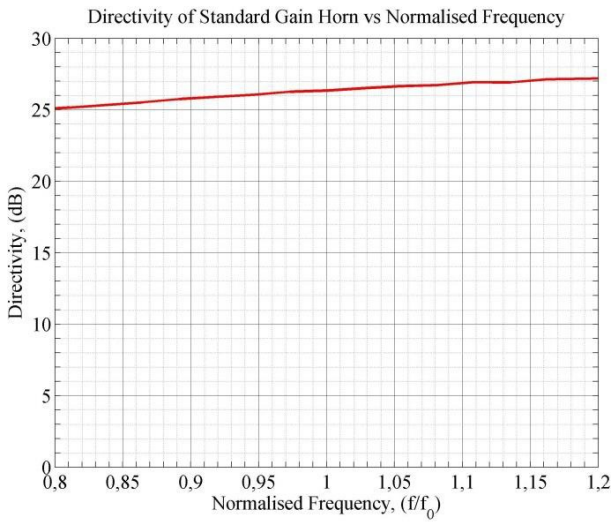
| Frequency [f/f0] | Directivity [dB] | FWHM (deg.) | |
|------------------|------------------|-------------|---------|
| | | E-plane | H-plane |
| 0,800 | 25,1 | 9,5 | 9,7 |
| 0,811 | 25,2 | 9,4 | 9,6 |
| 0,838 | 25,3 | 9,1 | 9,5 |
| 0,865 | 25,5 | 8,8 | 9,2 |
| 0,892 | 25,8 | 8,6 | 9,0 |
| 0,919 | 25,9 | 8,3 | 8,8 |
| 0,946 | 26,1 | 8,2 | 8,6 |
| 0,973 | 26,3 | 7,9 | 8,5 |
| 1,000 | 26,3 | 7,7 | 8,2 |
| 1,027 | 26,5 | 7,6 | 8,2 |
| 1,054 | 26,7 | 7,3 | 8,0 |
| 1,081 | 26,7 | 7,3 | 7,9 |
| 1,108 | 26,9 | 7,1 | 7,7 |
| 1,135 | 26,9 | 7,0 | 7,6 |
| 1,162 | 27,1 | 6,8 | 7,5 |
| 1,189 | 27,2 | 6,7 | 7,4 |
| 1,200 | 27,2 | 6,6 | 7,4 |

Table 3: Antenna radiation pattern values vs. frequency.

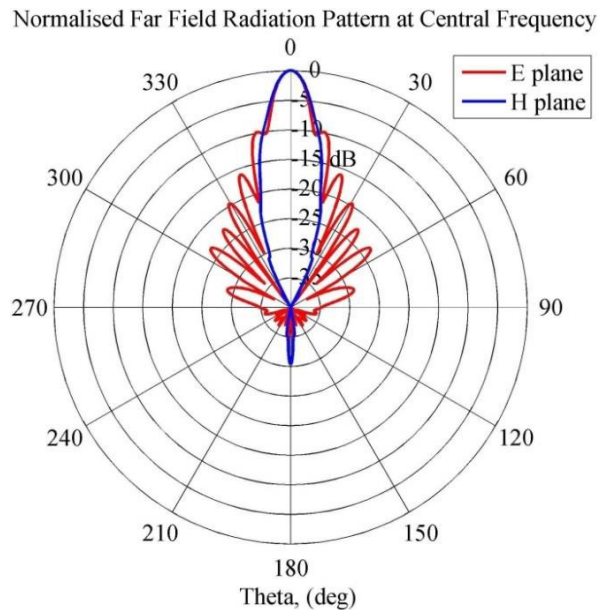
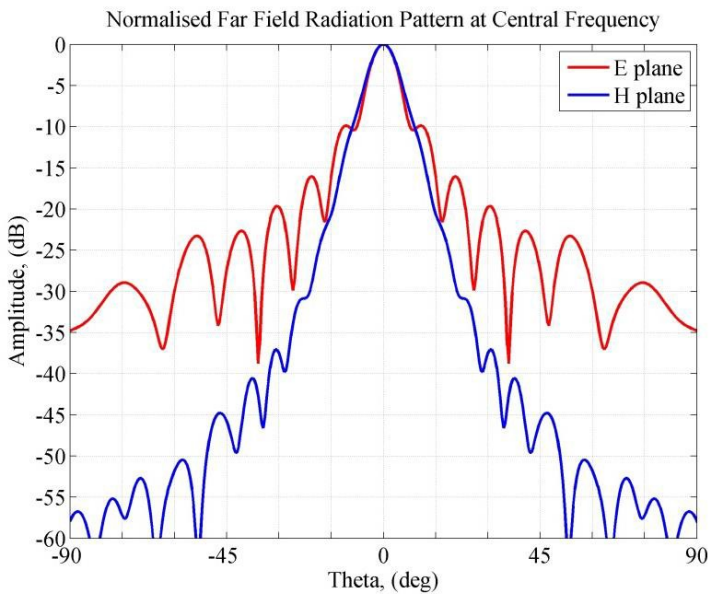
Antenna Dimensions



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Radiation Patterns



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