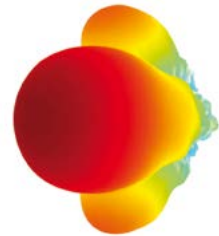


Standard Gain Horns



Typical 3D radiation pattern



SOLUTION FOR

- Gain reference for high gain antennas
- Antenna measurements

Main features

Technical performance

- Stable gain with frequency
- Linear polarization
- Low return loss / VSWR

Design

- Lightweight for easy handling
- Designed to meet NRL-4433

Surface treatment

- Surtec 650 according to MIL-C 5541E class 3
- Polyurethane paint

Repeatability

- Stiff and robust mechanical design
- Standard MVG circular interface for precision centering
- Precision pin for accurate polarization alignment
- Precision machined
- High-reliability coaxial connector

Delivered documents

- Typical performance data (TYMEDA™)
- Measured return loss data

Product configuration

Equipment

- Mounting flange
- Integrated coaxial transition with high precision connector

Related services

- Calibration and maintenance
- Customization

■ Included □ Optional



SMART POSITIONING

The circular interface allows the user to position and center the antenna with very high accuracy. The horn is fastened to the customer's mounting support by four screws and the alignment is determined by a precision pin in the mechanical interface plate.

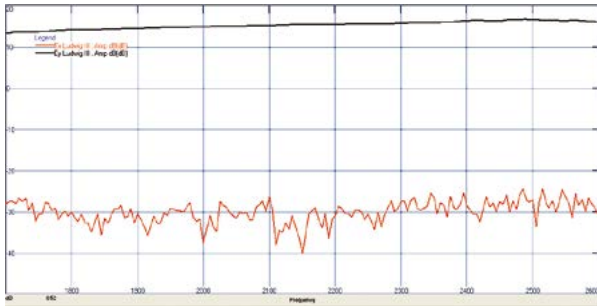
Electrical characteristics

Part number	Type of antenna	Frequency range [GHz]	Waveguide band	Polarization	Gain at center frequency [dBi]	Return loss [dB] (VSWR)	Cross-polar discrimination [dB]	Impedance [Ohms]	Power handling ⁽¹⁾ (CW) [W] SMA-N-K
SGH049	Pyramidal horn	0.49 – 0.75	WR1500	Single linear	15.5	< -15 (< 1.4)	> 40	50	530 1600 -
SGH075	Pyramidal horn	0.75 – 1.12	WR975	Single linear	15.5	< -15 (< 1.4)	> 40	50	400 1300 -
SGH096	Pyramidal horn	0.96 – 1.45	WR770	Single linear	13.7	< -15 (< 1.4)	> 40	50	380 1200 -
SGH112	Pyramidal horn	1.12 – 1.70	WR650	Single linear	15.5	< -15 (< 1.4)	> 40	50	360 1100 -
SGH170-A	Pyramidal horn	1.70 – 2.60	WR430	Single linear	15.5	< -15 (< 1.4)	> 40	50	290 930 -
SGH220	Pyramidal horn	2.20 – 3.30	WR340	Single linear	18.0	< -15 (< 1.4)	> 40	50	250 800 -
SGH260	Pyramidal horn	2.60 – 3.95	WR284	Single linear	18.0	< -15 (< 1.4)	> 40	50	230 750 -
SGH395	Pyramidal horn	3.95 – 5.85	WR187	Single linear	18.0	< -15 (< 1.4)	> 40	50	190 610 -
SGH585	Pyramidal horn	5.85 – 8.20	WR137	Single linear	22.1	< -15 (< 1.4)	> 40	50	150 490 -
SGH705	Pyramidal horn	7.05 – 10.00	WR112	Single linear	18.0	< -15 (< 1.4)	> 40	50	120 400 -
SGH820	Pyramidal horn	8.20 – 12.40	WR90	Single linear	22.1	< -15 (< 1.4)	> 40	50	100 320 -
SGH1000	Pyramidal horn	10.00 – 15.00	WR75	Single linear	24.7	< -15 (< 1.4)	> 40	50	110 - -
SGH1240	Pyramidal horn	12.40 – 18.00	WR62	Single linear	24.7	< -15 (< 1.4)	> 40	50	95 300 -
SGH1800	Pyramidal horn	18.00 – 26.50	WR42	Single linear	24.7	< -15 (< 1.4)	> 40	50	75 - -
SGH2200	Pyramidal horn	22.00 – 33.00	WR34	Single linear	24.7	< -15 (< 1.4)	> 40	50	- - 20
SGH2650	Pyramidal horn	26.50 – 40.00	WR28	Single linear	24.7	< -15 (< 1.4)	> 40	50	- - 15
SGH3300	Pyramidal horn	33.00 – 50.00	WR22	Single linear	24.7	< -20 (< 1.2)	> 40	N/A	N/A
SGH4000	Pyramidal horn	40.00 – 60.00	WR19	Single linear	24.7	< -20 (< 1.2)	> 40	N/A	N/A
SGH5000	Pyramidal horn	50.00 – 75.00	WR15	Single linear	24.7	< -20 (< 1.2)	> 40	N/A	N/A
SGH6000	Pyramidal horn	60.00 – 90.00	WR12	Single linear	24.7	< -20 (< 1.2)	> 40	N/A	N/A
SGH7500	Pyramidal horn	75.00 – 110.00	WR10	Single linear	24.7	< -20 (< 1.2)	> 40	N/A	N/A

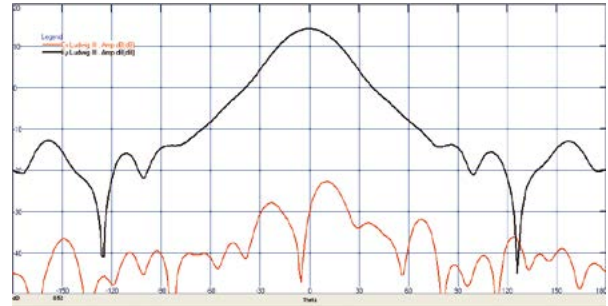
(1) 25°C at sea level depending on RF connector type

SGH170-A electrical performance

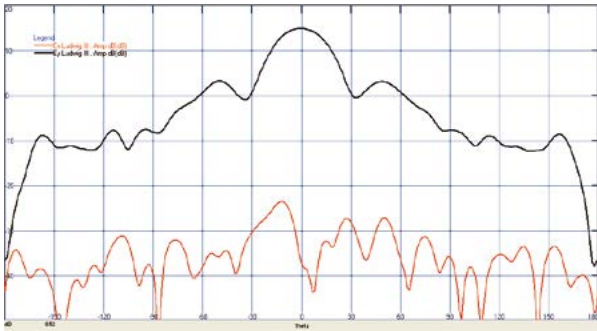
Co- & Cross-polarization vs frequency



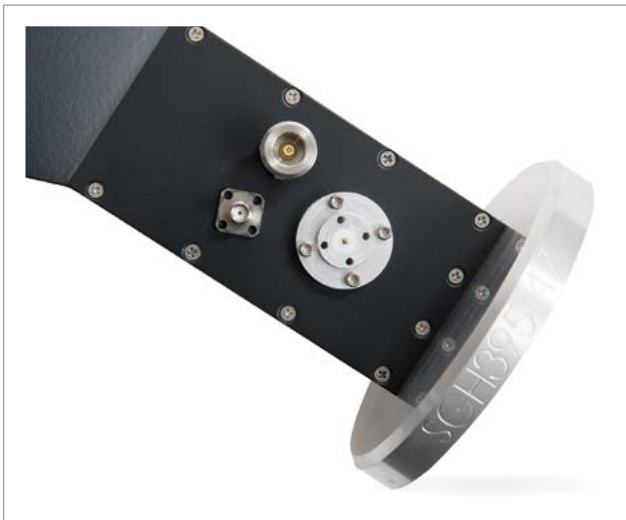
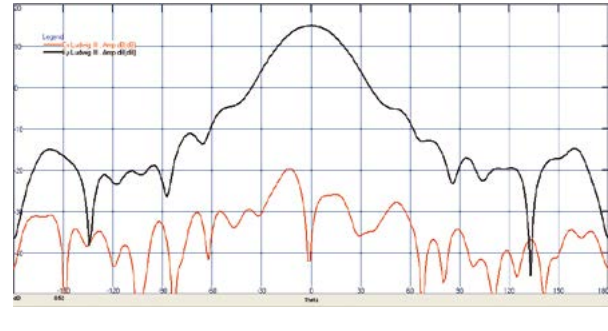
H-plane @ 1800 MHz



E-plane @ 2000 MHz



H-plane @ 2000 MHz



Mechanical characteristics

Part number	Dimensions (H x W x L) [mm]	Weight (approx.) [Kg]	RF Connector	Material	Treatment	Interface
SGH049	956 x 1289 x 1252	26.8	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 110 mm
SGH075	620 x 836 x 853	15	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 110 mm
SGH096	417 x 561 x 643	8.1	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 110 mm
SGH112	417 x 561 x 583	7.2	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 110 mm
SGH170-A	277 x 373 x 392	3.2	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 110 mm
SGH220	288 x 387 x 559	3.0	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 110 mm
SGH260	244 x 328 x 539	2.6	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 110 mm
SGH395	164 x 220 x 360	1.2	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 110 mm
SGH585	218 x 293 x 523	2.1	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH705	97 x 130 x 233	0.5	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH820	148 x 198 x 353	0.9	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH1000	154 x 187 x 441	1.3	SMA ⁽³⁾ Female	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH1240	126 x 153 x 368	0.7	SMA ⁽¹⁾ Female (N-type ⁽²⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH1800	84 x 103 x 257	0.4	SMA ⁽³⁾ Female	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH2200	66 x 81 x 222	0.45	2.92 mm ⁽⁴⁾ Female	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH2650	58 x 70 x 185	0.2	2.92 mm ⁽⁴⁾ Female	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH3300	44 x 53.5 x 216	0.28	WR22 (2.4 mm ⁽⁶⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH4000	38.8 x 47.1 x 174.2	0.175	WR19 (1.85 mm ⁽⁷⁾ optional)	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH5000	29.4 x 35.7 x 169	0.09	WR15	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm
SGH7500	21 x 25.4 x 123.8	0.12	WR10	Aluminum	Surtec 650 ⁽⁵⁾	Circular Ø 60 mm

(1) Southwest 212-503 SF

(2) Southwest 312-14 SF

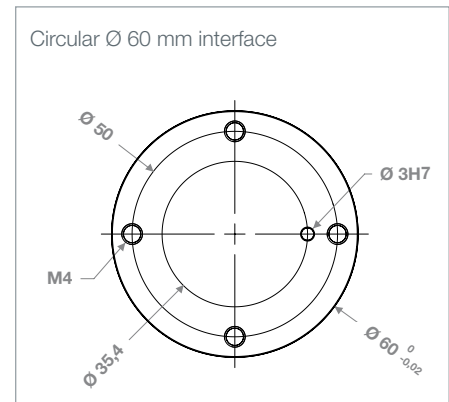
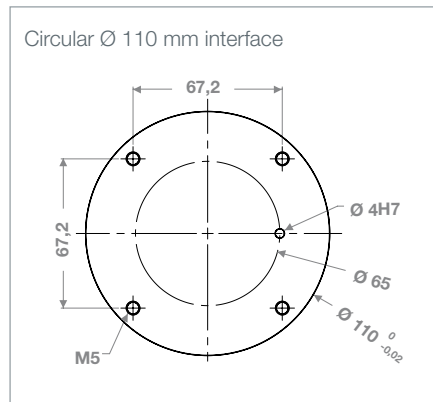
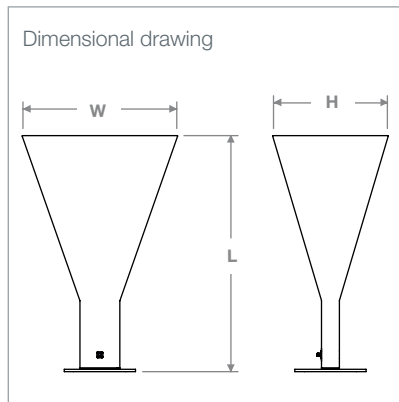
(3) Southwest 212-513 SF

(4) Southwest 1012-23 SF

(5) According to MIL-C 5541E class 3

(6) Southwest 1812-05 SF

(7) Southwest 1412-04 SF





Contact your local sales representative for more information

www.mvg-world.com/antennas

salesteam@mvg-world.com