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## ICONS DESCRIPTION



- mass



- operating temperature range



- type of connector



- receiving antenna



- transmitting antenna



- waveguide type

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www.skard.ru



# ANTENNAS FOR MEASURING MAGNETIC FIELD

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS1.03	Active receiving loop antenna.	9 kHz - 30 MHz	6
AS9.64	Passive receiving-broadcasting combined antenna of magnetic and electric field.	9 kHz - 30 MHz	7
AS1.61	Active receiving loop antenna.	20 - 600 MHz	8



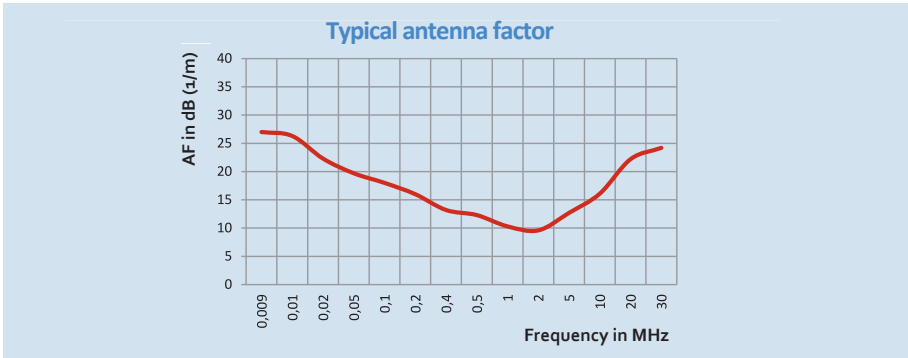


AS1.03 is an active shielded handheld loop antenna with nearly constant antenna factor for 9kHz-30MHz frequency range. It can be used for antenna testing, EMI testing and RFI finding.



- ✓ Supply is possible with function of blanking the active part;
- ✓ Powering of antenna provides from external source of power. (Battery Pack)

Specifications			
Frequency range	9kHz – 30 MHz	Dimensions	84 x 599 x 690 mm
Antenna factor	from 10 to 27 dB (1/m)	Loop diameter	599 mm
Sensitive by field, not worse	25 mkA/m	Voltage	± 15 V
Margin of error AF	± 1,5 dB	Consumption current	≥ 100 mA



# PASSIVE RECEIVING-BROADCASTING COMBINED ANTENNA OF MAGNETIC AND ELECTRIC FIELD AS9.64

9 kHz - 30 MHz



AS9.64 is a combined loop and rod antenna for transmit and receive of high intensive magnetic and electric field.



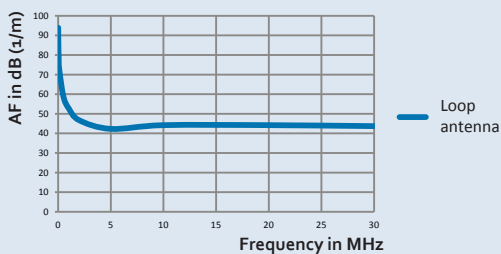
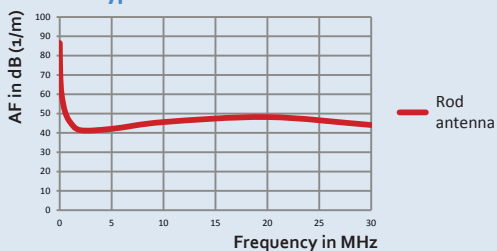
- ✓ For evaluation of shielding efficiency;
- ✓ Three mods of operational: transmit of magnetic field, transmit of electric field;
- ✓ Dummy load for generator 50 OHm

## Specifications

Frequency range	9 kHz – 30 MHz	Dimensions	261 x 890x 1145mm
Antenna factor	from 41 to 86 dB (1/m)	Loop diameter	890 mm
VSWR typical*	≤ 1,8	Rod height	1000 mm
Polarization	vertical	Max input power	≤ 5 V

\* In mod of radiating an electric field.

## Typical antenna factor



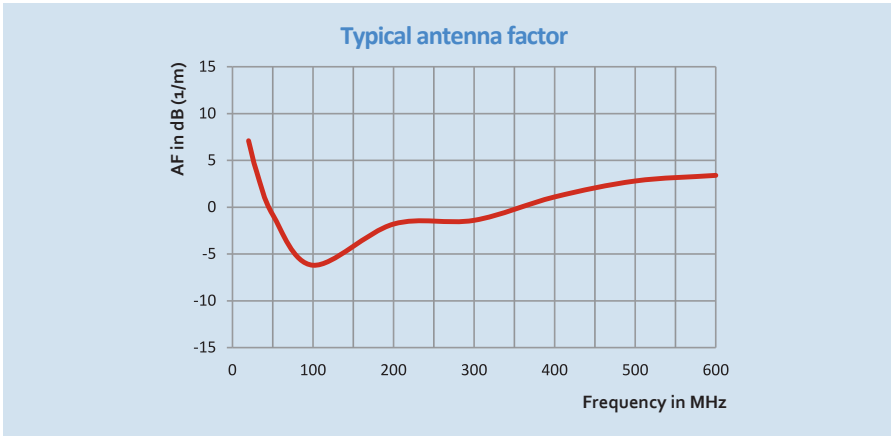


AS1.61 is an active shielded handheld loop antenna with nearly constant antenna factor for 20-600 MHz frequency range. It can be used for antenna testing, EMI testing and RFI finding.

- ✓ Supply is possible with function of blanking the active part;
- ✓ Powering of antenna provides from external source of power. (Battery Pack)

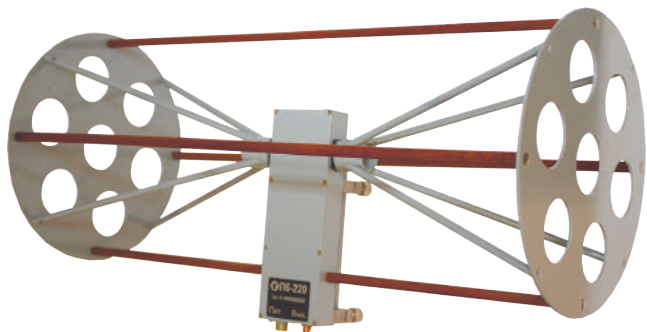


Specifications			
Frequency range	20 - 600 MHz	Dimensions	191 x 88 x 69 mm
Antenna factor	from 10 to -6 dB (1/m)	Loop diameter	88 mm
Margin of error AF	± 2 dB	Voltage	± 12 (± 15) V
		Consumption current	≥ +50 mA



# ANTENNAS FOR MEASURING ELECTRIC FIELD

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS2.02	Active vertical monopole antenna of electric field.	9 kHz - 30 MHz	10
AS2.21	Active receiving antenna of electric field.	9 kHz - 30 MHz	11
AS2.69	Active measuring reconfigurable antenna of electric field.	9 kHz - 30 MHz	12



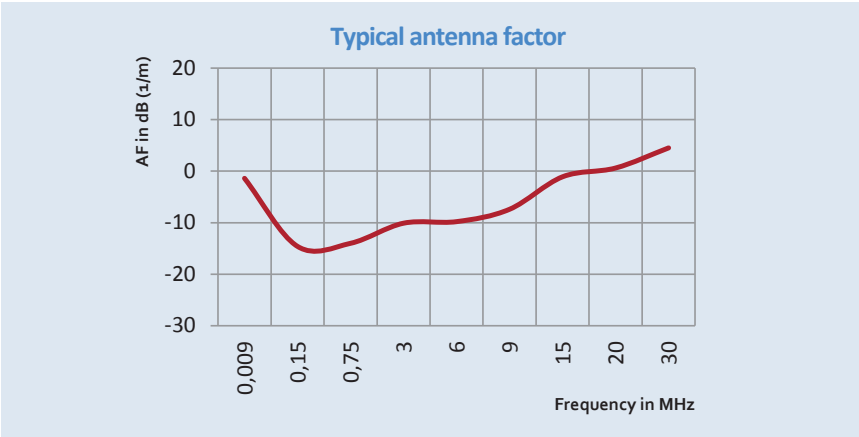
ACTIVE VERTICAL MONOPOLE  
ANTENNA OF ELECTRIC FIELD  
AS2.02

Active vertical monopole antennas became very popular in the EMC community and designed for EMI testing, for measuring the vertical polarized E-Field component of an electromagnetic field.



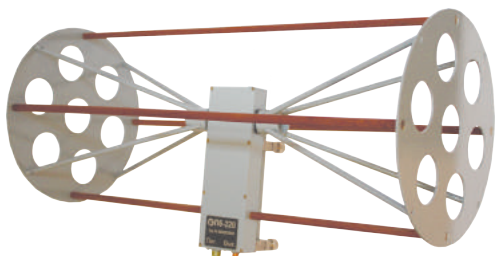
- ✓ Optionally function of blanking the active part;
- ✓ Active part of antenna is powered by an external power source. (Battery Pack)

Specifications			
Frequency range	9 kHz – 30 MHz	Dimensions	1476 x 688 x 688 mm
Antenna factor	from -14,0 to 4,5 dB (1/m)	Voltage	± 15 V
Sensitive by field, not worse	25 mkA/m	Consumption current	100 mA
Margin of error, AF	± 1,5 dB	Rod height	1400 mm



# ACTIVE RECEIVING ANTENNA OF ELECTRIC FIELD AS2.21

**9 kHz - 30 MHz**



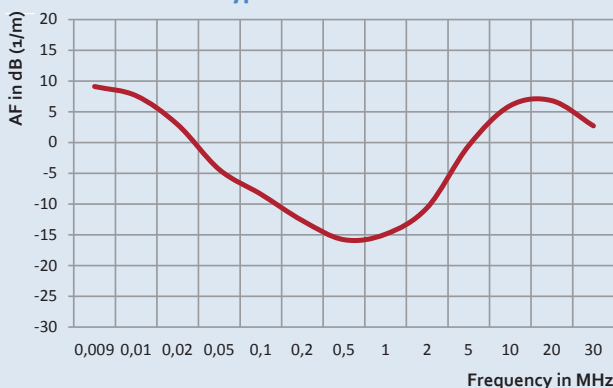
Highly effective for metrological applications and evaluation objectives of EMC and TEMPEST.



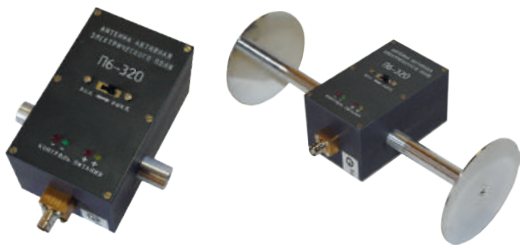
- ✓ Use is possible in conditions of heterogeneous electric field under the influence of underlying surface;
- ✓ Possesses high symmetry, noise immunity and stability of characteristics;
- ✓ Supply is possible with function of blanking the active part;
- ✓ Powering of active antenna part provides from external source of power. (Battery Pack)

Specifications			
Frequency range	9 kHz – 30 MHz	Dimensions	459 x 200 x 236 mm
Coefficient of calibration	from -15,8 to 9,2 dB (1/m)	Voltage	± 15 V
Margin of error AF	± 1,5 dB	Consumption current	± 100 mA

**Typical antenna factor**



ACTIVE MEASURING RECONFIGURABLE  
ANTENNA OF ELECTRIC FIELD  
AS2.69

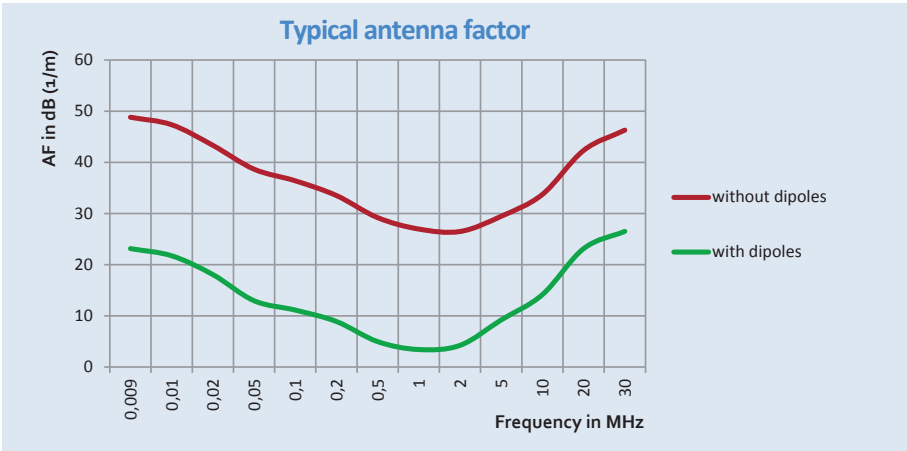


Antenna consists of two symmetric vibrators with opportunity of alteration geometrical dimensions of receiving dipoles for adapting receiving system to measuring conditions.



- ✓ Effective for metrological applications and evaluation objectives of EMC and TEMPEST.
- Two mods of work: standard and highly sensitive (with connected dipoles);
- Equipped with built-in battery power, powers from battery not less than 36 hours (saline batteries) or 54 hours (alkaline batteries), can be installed Battery Pack.

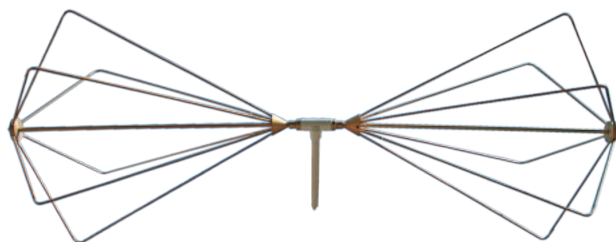
Specifications	
Frequency range	9 kHz - 30 MHz
Dimensions	without dipoles: 107 x 137 x 100 mm with dipoles: 274 x 137 x 100 mm
Coefficient of calibration	without dipoles: from 26 to 48 dB (1/m) with dipoles: from 3 to 26 dB (1/m)
Margin of error AF	± 2 dB





# BICONICAL AND VIBRATORY ANTENNAS

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
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AS2.62.1	Broadband omnidirectional antenna.	20 MHz - 6 (8) GHz	15
AS2.62.2	Ultra-broadband active omnidirectional receiving antenna.	20 MHz - 8 GHz	16
AS3.04	Collapsible broadband measuring biconical antenna.	30 - 300 MHz	17
AS3.05	Broadband measuring biconical antenna.	30 - 300 MHz	18
AS3.66.1- AS3.66.2	Receiving-broadband biconical antennas.	30 - 300 MHz	19
AS3.09	Broadband measuring biconical antenna.	30 MHz - 1,5 GHz	20
AS7.38.1- AS7.38.2	Broadband omnidirectional antennas.	100 MHz - 2,8 GHz 30 MHz - 2,8 GHz	21
AS7.22	Broadband omnidirectional antenna.	300 MHz - 2 GHz	22
AS7.23M	Broadband omnidirectional antenna.	1 - 18 GHz	23
AS7.24	Broadband omnidirectional antenna.	18 - 40 GHz	24



DIPOLE RECONFIGURABLE ANTENNA  
AS2.83



Dipole reconfigurable antenna intended for forming electric field in frequency range 3 - 300 MHz, by 3 sectors: 3 - 30 MHz; 30 - 100 MHz; 100 - 300 MHz.



✓ Changing sectors of working range is carried out by changing dipole’s size, according to the figure.

Frequency range

Part A (dipole length 4 m)	3 - 30 MHz
Part B (dipole length 2 m)	30 - 100 MHz
Part C (dipole length 1 m)	100 - 300 MHz

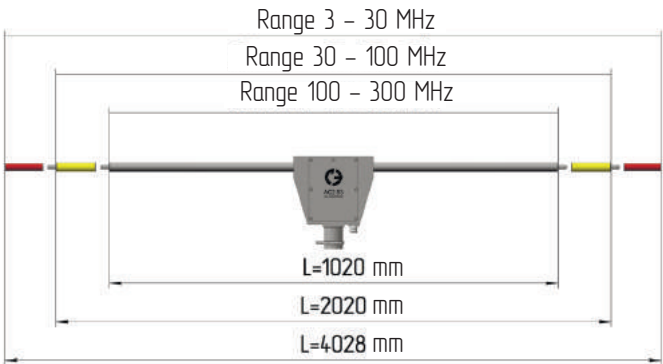
Gain

Part A, gain, $\geq -40$ dB
Part B, gain, $\geq -10$ dB
Part C, gain, $\geq -5$ dB

Specifications

Frequency range	3 – 300 MHz	Max linear dimension of the dipole	4028 mm
Weight	8 kg	Polarization	linear (horizontal)
Mast height	from 2 to 6 m*	Supplied stand	dielectric

\* in agreement with the Customer



Pic:

Dependence of the frequency range of configurations of dipoles.

# BROADBAND OMNIDIRECTIONAL ANTENNA

## AS2.62.1

20 MHz - 6 (8) GHz

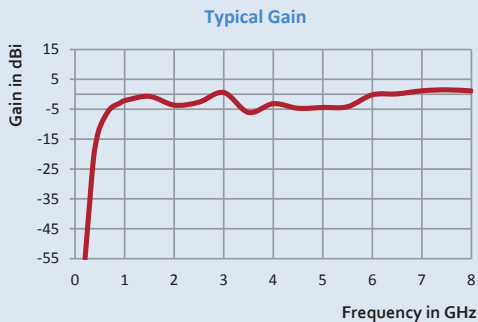
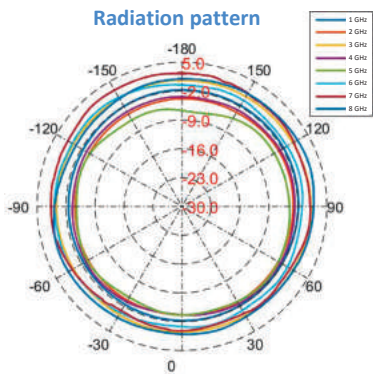


AS2.62.1 is a passive biconical antenna for surveillance and EMI testing that was designed to transmit and receive signal on the omnidirectional radiation.

✓ Provides uniform radiation patterns in wide frequency range.



Specifications	
Frequency range	20 MHz – 6 (8) GHz
VSWR typical	2,5
Polarization	vertical
Dimensions	D = 156 mm H = 434 mm
Gain	from -6 to +3 dB
Margin of error gain	± 2 dB



## ULTRA-BROADBAND ACTIVE OMNIDIRECTIONAL RECEIVING ANTENNA AS2.62.2



AS2.62.2 is an active biconical antenna for surveillance and EMI testing that was designed to transmit and receive signal on the omnidirectional radiation.

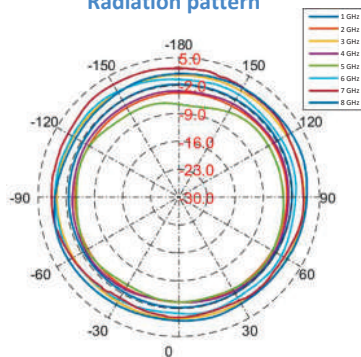
- ✓ Signal cable powering is possible;
- ✓ Uniform radiation pattern in wide frequency range;
- ✓ Built-in preamplifier;
- ✓ Active part of antenna is powered by external source.



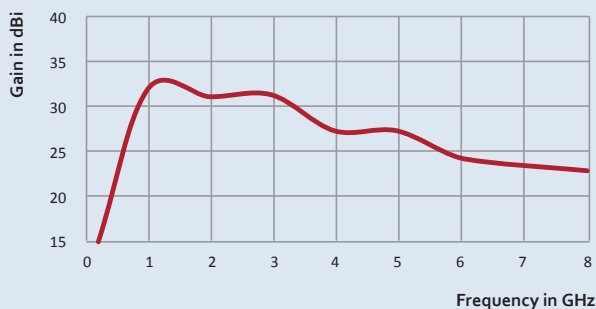
### Specifications

Frequency range	20 MHz – 8 GHz
VSWR typical	2,5
Polarization	vertical
Power connector	2PM 14
Dimensions	D = 156 mm H = 469 mm
Gain with LNA	from 24 to 32 dB
Margin of error gain	± 2 dB
NF of the active part	4 dB
Voltage	+ 5 V
Current consumption	100 mA

### Radiation pattern

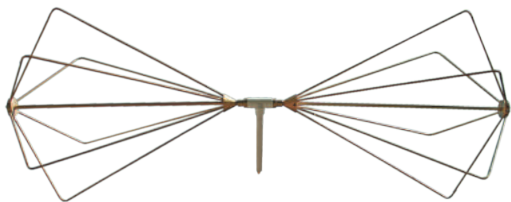


### Typical gain with LNA



COLLAPSIBLE BROADBAND MEASURING  
BICONICAL ANTENNA  
AS3.04

30 - 300 MHz

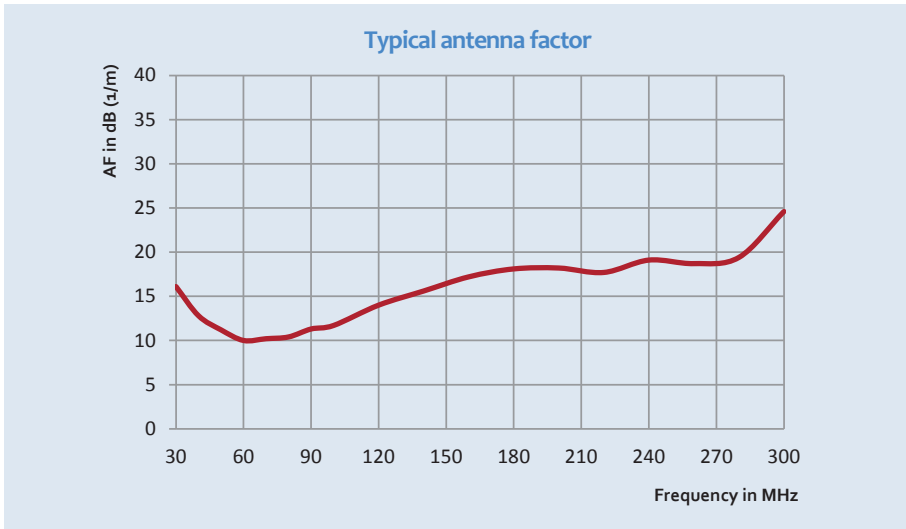


AS3.04 is a biconical antenna ideally for EMI testing, surveillance, antenna testing.

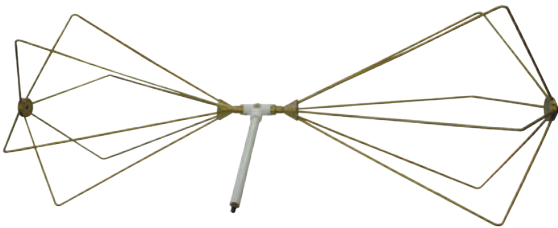


- ✓ Waterproof rate: IP54;
- ✓ Collapsible or open conical elements.

Specifications			
Frequency range	30 – 300 MHz	Dimensions	1327 x 501 x 501 mm
Antenna factor	from 10 to 25 dB (1/m)	Polarization	linear
VSWR typical	2	Margin of error AF	± 2,0 dB



BROADBAND MEASURING  
BICONICAL ANTENNA  
AS3.05



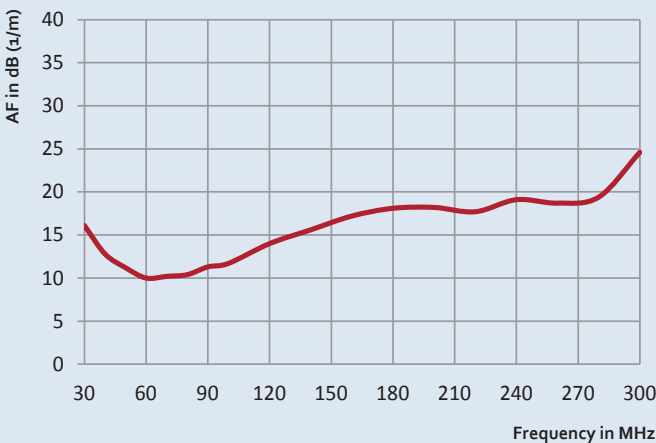
AS3.05 is a biconical antenna ideally for EMI testing, surveillance, antenna testing.



- ✓ Waterproof rate: IP54;
- ✓ Collapsible or open conical elements.

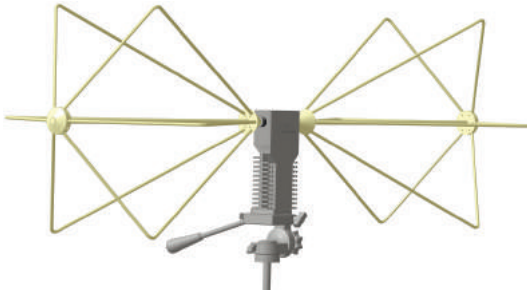
Specifications			
Frequency range	30 – 300 MHz	Dimensions	1327 x 501 x 501 mm
Antenna factor	from 10 to 25 dB (1/m)	Polarization	linear
VSWR typical	2	Margin of error AF	± 2,0 dB

Typical antenna factor



## RECEIVING-BROADCASTING BICONICAL ANTENNAS AS3.66.1-AS3.66.2

**30 - 300 MHz**



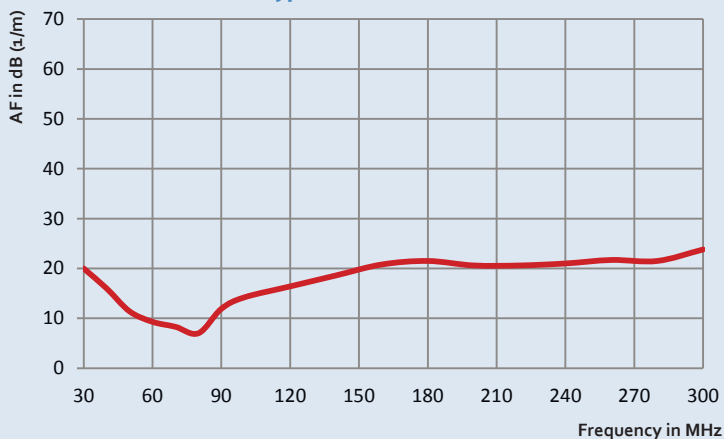
AS3.66 is biconical antenna for receiving and generating an electromagnetic field of high intensity with maximum power input 50W for AS3.66.1 and 100W for AS3.66.2.



✓ Waterproof rate: IP54.

Specifications			
Frequency range	30 - 300 MHz	Dimensions	1326 x 435,5 x 502 mm
Antenna factor	≤ 30 dB	Polarization	linear
VSWR typical	2	Margin of error AF	± 2 dB
Max input power	50 W		

**Typical antenna factor**



BROADBAND MEASURING  
BICONICAL ANTENNA  
AS3.09

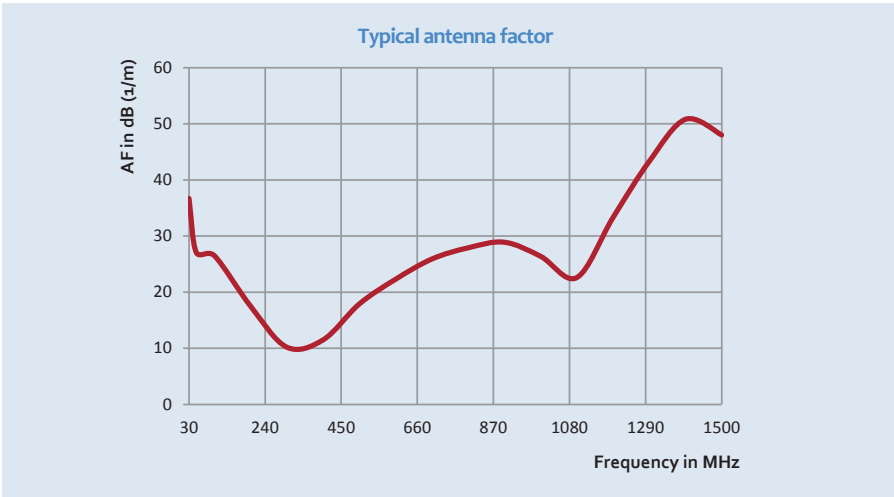


For metrological applications and evaluation objectives of EMC and TEMPEST.



- ✓ Function of blanking the active part;
- ✓ Waterproof rate: IP54;
- ✓ Active antenna part is powered by battery pack.

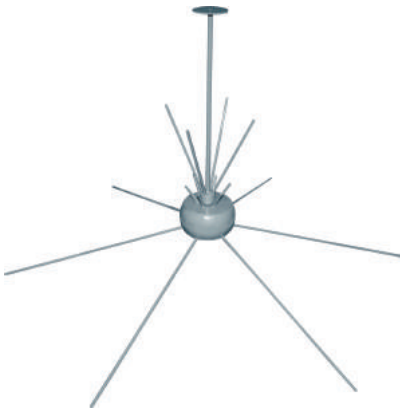
Specifications			
Frequency range	30 MHz - 1,5 GHz	Dimensions	400 x 207 x 126 mm
Antenna factor	from 10 to 50 dB (1/m)	Voltage	+ 5 V
Margin of error AF	± 1,5 dB	Consumption current	150 mA





## BROADBAND OMNIDIRECTIONAL ANTENNAS AS7.38.1 - AS7.38.2

**100 MHz - 2,8 GHz**  
**30 MHz - 2,8 GHz**



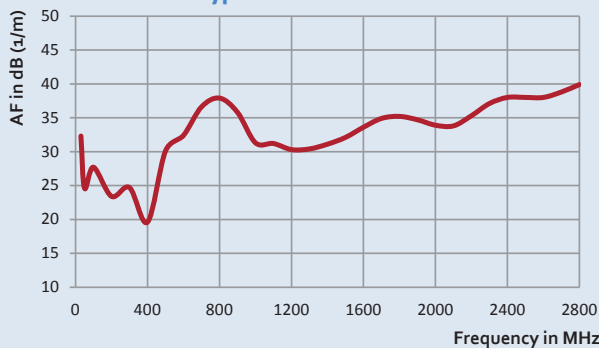
AS7.38 is a combined biconical antenna for surveillance and EMI testing that was designed to transmit and receive signal on the omnidirectional radiation.



- ✓ Wide frequency range;
- ✓ Collapsible constructions.

Specifications			
Frequency range: AS7.38.1 AS7.38.2	100 MHz– 2,8 GHz 30 MHz– 2,8 GHz	Polarization	vertical
Antenna factor	from 20 to 42 dB (1/m)	Working dimensions	D = 996 mm H = 1010 mm
Margin of error AF	± 2,5 dB	Ununiform radiation pattern typical	+5 dB
VSWR typical	not applicable		

Typical antenna factor



300 MHz - 2 GHz

BROADBAND OMNIDIRECTIONAL ANTENNA  
AS7.22



AS7.22 is a biconical antenna for surveillance and EMI testing that was designed to transmit and receive signal on the omnidirectional radiation.



- ✓ Wide frequency range;
- ✓ Small mass and dimensions.

Specifications			
Frequency range	300 MHz - 2 GHz	Dimensions	D = 321 mm H = 280 mm
Antenna factor	42 dB (1/m)	Polarization	vertical
VSWR typical	2,5		

BROADBAND OMNIDIRECTIONAL ANTENNA  
AS7.23M

1 - 18 GHz

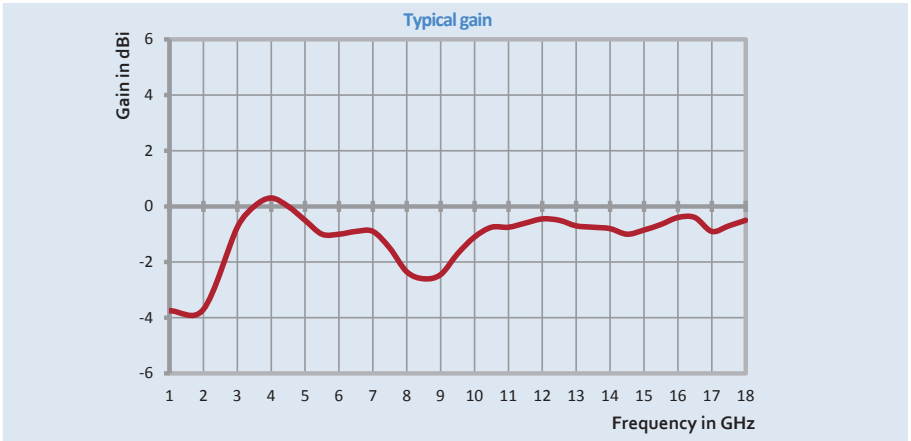


AS7.23M is a biconical antenna for surveillance and EMI testing that was designed to transmit and receive signal on the omnidirectional radiation.



- ✓ Wide frequency range;
- ✓ Small mass and dimensions.

Specifications			
Frequency range	1 - 18 GHz	Dimensions	D = 100 mm H = 112 mm
Gain	from -4 to +0,3 dB	Polarization	vertical
VSWR typical	2		



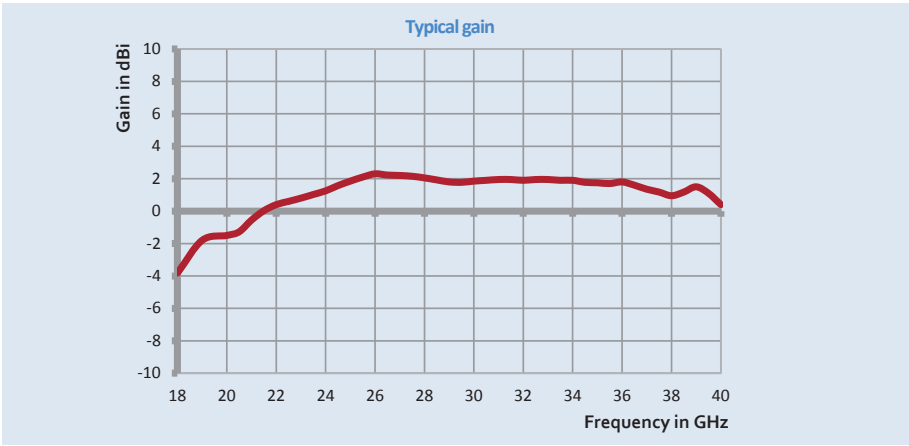


AS7.24 is a biconical antenna for surveillance and EMI testing that was designed to transmit and receive signal on the omnidirectional radiation.



- ✓ Wide frequency range;
- ✓ Small mass and dimensions.

Specifications			
Frequency range	18 - 40 GHz	Dimensions	D = 47 mm H = 60 mm
Gain	≥ -4 dB	Polarization	vertical
VSWR typical	2		



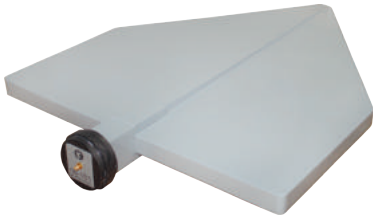
# LOG-PERIODICAL ANTENNAS

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS4.70	Ultra-broadband combined log-periodical antenna.	30 MHz - 6 GHz	26
AS4.63	Collapsible ultra-broadband measuring antenna.	80 MHz - 3 GHz	27
AS4.71	Broadband combined log-periodical antenna.	100 MHz - 6 GHz	28
AS4.06	Broadband measuring log-periodical antenna.	300 MHz - 3 GHz	29
AS4.07	Ultra-broadband log-periodical measuring antenna.	300 MHz - 6 GHz	30
AS4.30	Compact log-periodical antenna.	1 - 8,2 GHz	31
AS4.31	Compact broadband log-periodical antenna.	1 - 18 GHz	32
AS4.78	Broadband measuring antenna.	1 - 18 GHz	33
AS4.79	Active-passive broadband measuring antenna system.	1 - 18 GHz	34



30 MHz - 6 GHz

ULTRA-BROADBAND COMBINED  
LOG-PERIODICAL ANTENNA  
AS4.70



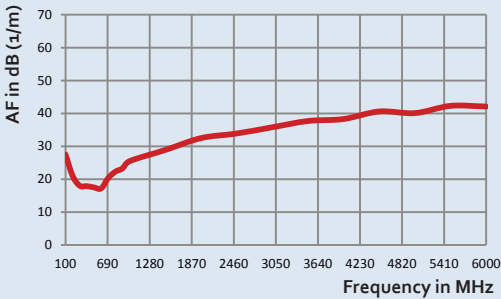
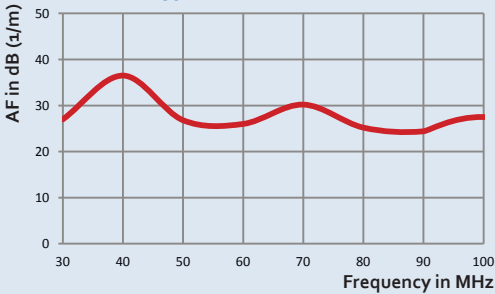
AS4.70 is an ultra-broadband lightweight antenna of very compact size. This design is an ideal solution for EMI testing, RFI finding, surveillance and other applications.



- ✓ Wide operating frequency range from 30 MHz to 6 GHz witch covers with one antenna without additional switching;
- ✓ Small mass and dimensions.

Specifications			
Frequency range	30 MHz - 6 GHz	Max input power	0,5 W
Antenna factor	from 15 to 45 dB (1/m)	Polarization	linear
VSWR typical	2	Dimensions	746 x 546 x 88 mm

Typical antenna factor



# COLLAPSIBLE ULTRA-BROADBAND MEASURING ANTENNA AS4.63

80 MHz - 3 GHz



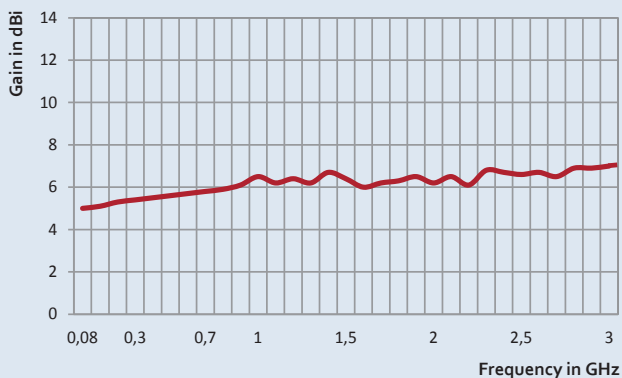
AS4.63 is a compact, lightweight antenna that was designed to ensure maximum gain, low VSWR and high power handling capabilities. This compact design is an ideal solution for EMI testing, antenna gain and pattern measurements.



- ✓ High resistance to the effects of external climatic factors.

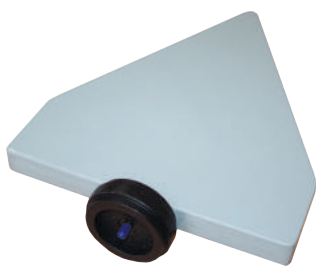
Specifications			
Frequency range	80 MHz–3 GHz	Dimensions	1980x 2140x 88 mm
Gain	6 dB	Polarization	linear
VSWR typical	2	Margin of error gain	± 2 dB

## Typical gain



100 MHz - 6 GHz

BROADBAND COMBINED  
LOG-PERIODICAL ANTENNA  
AS4.71

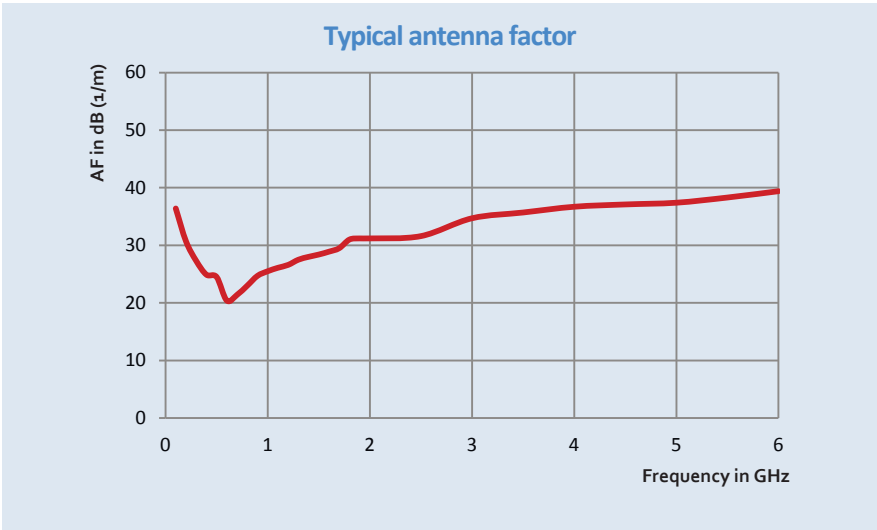


AS4.71 is an ultra-broadband lightweight antenna of very compact size. This design is an ideal solution for EMI testing, RFI finding, surveillance and other applications.



- ✓ Wide operating frequency range from 100MHz to 6GHz witch covers with one antenna without additional switching;
- ✓ Small mass and dimensions.

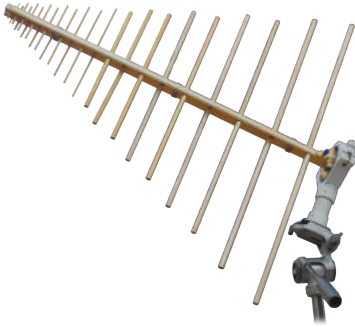
Specifications			
Frequency range	100 MHz - 6 GHz	Max input power	0,5 W
Antenna factor	from 20 to 40 dB (1/m)	Polarization	linear
VSWR typical	2	Dimensions	456 x 303 x 88 mm





## BROADBAND MEASURING LOG-PERIODICAL ANTENNA AS4.06

300 MHz - 3 GHz



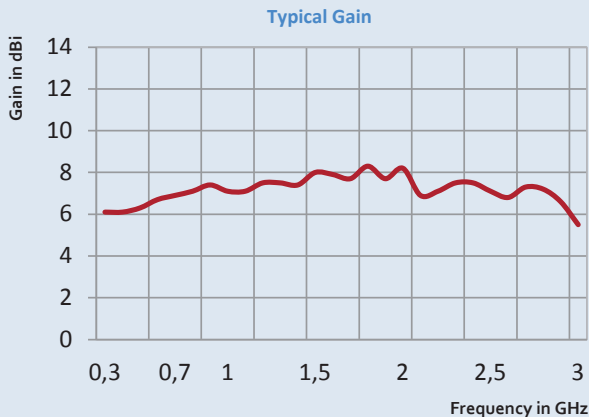
AS4.06 is a compact, lightweight antenna that was designed to ensure maximum gain, low VSWR and high power handling capabilities. This compact design is an ideal solution for EMI testing, antenna gain and pattern measurements.



- ✓ Can be used as working standard;
- ✓ Waterproof rate: IP54.

### Specifications

Frequency range	300 MHz - 3 GHz	Dimensions	726 x 659 x 88 mm
Gain	≥ 4,0 dB	Polarization	linear
VSWR typical	2	Margin of error gain	± 2 dB



300 MHz - 6 GHz

ULTRA-BROADBAND LOG-PERIODICAL  
MEASURING ANTENNA  
AS4.07

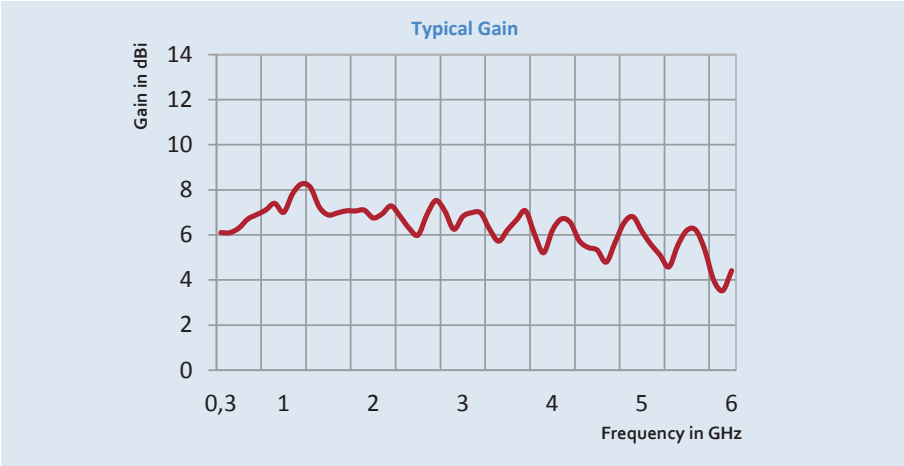


AS4.07 is a compact, lightweight antenna that was designed to ensure maximum gain, low VSWR and high power handling capabilities. This compact design is an ideal solution for EMI testing, antenna gain and pattern measurements.



- ✓ Wide operating frequency range which covers by one antenna without additional switching.
- ✓ Waterproof rate: IP54.

Specifications			
Frequency range	300 MHz - 6 GHz	Dimensions	786 x 659 x 88 mm
Gain	≥ 3,5 dB	Polarization	linear
VSWR typical	2	Margin of error gain	± 2 dB



## COMPACT LOG-PERIODICAL ANTENNA AS4.30

1 - 8,2 GHz

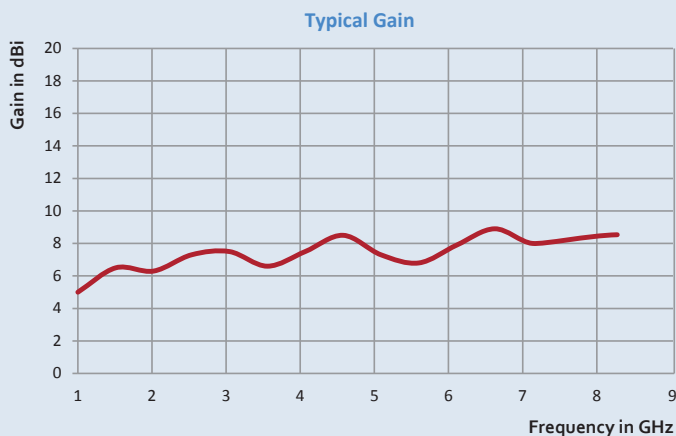


AS4.30 is a compact broadband log-periodic microstrip antenna in lightweight high frequency plastic case. This antenna was designed for EMI testing, gain and pattern measurement.



- ✓ Can be used as an element of multibeam antenna arrays;
- ✓ Small mass and dimensions.

Specifications			
Frequency range	1 – 8,2 GHz	Dimensions	306 x 198 x 88 mm
Gain	≥ 4 dB	Polarization	linear
VSWR typical	2,5	Margin of error gain	± 2 dB



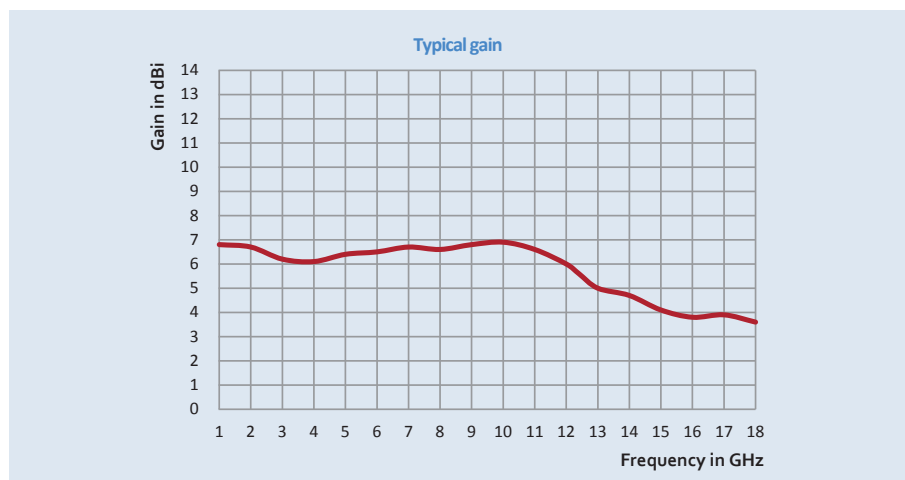


AS4.31 is a compact broadband log-periodic microstrip antenna in lightweight high frequency plastic case. This antenna was designed for EMI testing, gain and pattern measurement.



- ✓ Can be used as an element of multibeam antenna arrays;
- ✓ Small mass and dimensions.

Specifications			
Frequency range	1 – 18 GHz	Dimensions	306 x 198 x 88 mm
Gain	≥ 4 dB	Polarization	linear
VSWR typical	2,5	Margin of error gain	± 2 dB



# BROADBAND MEASURING ANTENNA AS4.78

1 - 18 GHz

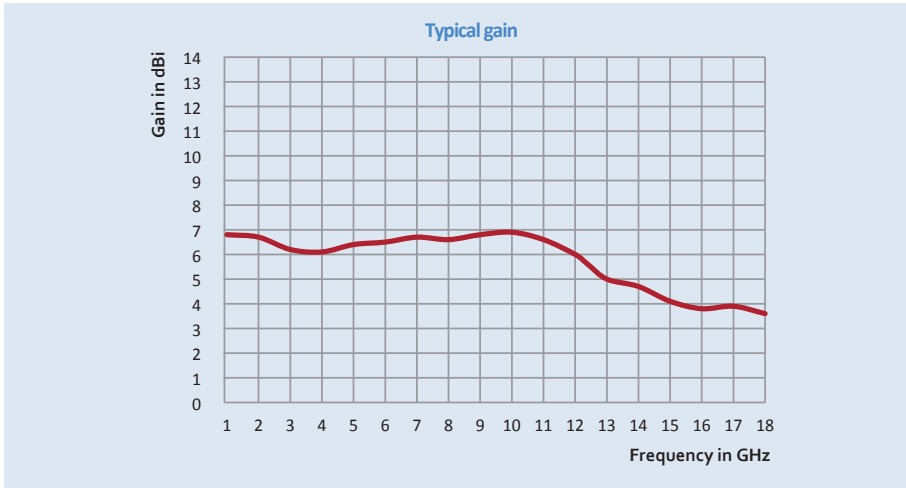


AS4.78 is a compact ultra-broadband log-periodic antenna for direction finding RFI, EMI testing. Produced using lightweight, high frequency plastic cases in two models: with active and without active units.



- ✓ Rotatable anatomical handle that allows to orient the antenna along the polarization;
- ✓ Optionally equipped with a laser marker powering from built-in battery pack.

Specifications			
Frequency range	1 – 18 GHz	Margin of error gain	± 2 dB
VSWR typical	2,5	Dimensions	513 x 91 x 242 mm
Gain	from 3,5 to 7 dB	Polarization	linear





AS4.79 is a compact ultra-broadband log-periodic antenna for direction finding RFI, EMI testing. Produced using lightweight, high frequency plastic cases in two models: with active and without active units.

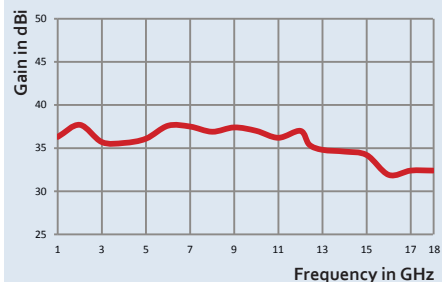


- ✓ Two mods of work:
  - active – preamplifier on
  - passive – preamplifier off
- ✓ Rotatable anatomical handle allows to orient the antenna polarization;
- ✓ Preamplifier and commutation circuit powers from built-in battery pack.

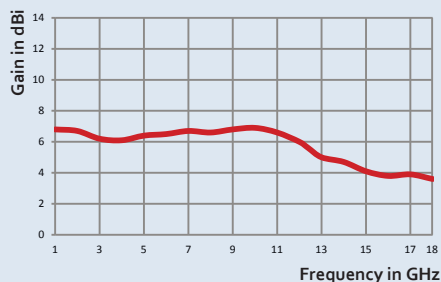
Specifications			
Frequency range	1 – 18 GHz	Margin of error gain	± 2 dB
VSWR typical	2,5	Dimensions	513 x 91 x 242 mm
Polarization	linear	Duration of continuous work in active mod	≥ 5 hours
Gain	with preamplifier: from 31 to 38 dB without preamplifier: from 3,5 to 7 dB		

\* mass including laser marker and battery pack.

Typical gain with preamplifier

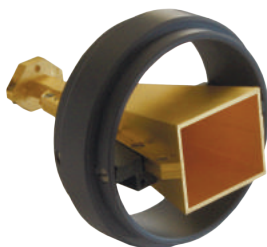


Typical gain without preamplifier

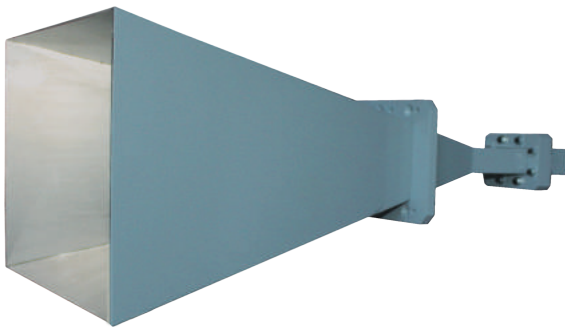


# HORN ANTENNAS

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS6.41	Pyramidal standard gain horn antenna.	18 - 26,5 GHz	39
AS6.42	Pyramidal standard gain horn antenna.	26,5 - 40 GHz	40
AS6.43	Pyramidal standard gain horn antenna.	40 - 60 GHz	41
AS6.44	Pyramidal standard gain horn antenna.	50 - 75 GHz	42
AS6.45	Pyramidal standard gain horn antenna.	75 - 110 GHz	43
AS6.14-x	Reconfigurable standard gain horn antenna.	8,2 ÷ 40 GHz	44
AS6.59	Ultra-broadband double-ridged waveguide horn antenna.	370 MHz - 6 GHz	47
AS6.17	Double-ridged waveguide horn antenna.	0,9 - 12,4 GHz	48
AS6.58.1	Double-ridged waveguide horn antenna.	0,8 - 18 GHz	49
AS6.58.2	Ultra-broadband double-ridged waveguide horn antenna.	0,8 - 22,5 GHz	50
AS6.18	Double-ridged waveguide horn antenna.	1 - 12 GHz	51
AS6.16	Double-ridged waveguide horn antenna.	2 - 18 GHz	52
AS6.19	Double-ridged waveguide horn antenna.	8 - 18 GHz	53
AS6.10	Double-ridged waveguide horn antenna.	12 - 40 GHz	54
AS6.15	Quad-ridged waveguide horn antenna (two-channel with biorthogonal linear polarization).	2 - 18 GHz	56
AS6.12	Quad-ridged waveguide horn antenna (dual circular polarization).	2 - 15 (18) GHz	57
AS6.11	Quad-ridged waveguide horn antenna.	18 - 40 GHz	58
AS6.13	Quad-ridged waveguide horn antenna (dual circular polarization).	18 - 40 GHz	59
AS6.27	Quad-ridged waveguide horn.	18 - 40 GHz	60
AS6.73.1- AS6.73.2	Square aperture pyramidal horn antennas with a orthomode transducer.	18 - 26,5 GHz	62
AS6.74.1- AS6.74.2	Square aperture pyramidal horn antennas with a orthomode transducer.	26,5 - 40 GHz	63
AS6.75.1- AS6.75.2	Square aperture pyramidal horn antennas with a orthomode transducer.	40 - 60 GHz	64
AF6.35	Narrow beam scalar horn antennas.	8,2 - 110 GHz	66
AF6.36	Wide beam scalar horn antennas.	8,2 - 110 GHz	69



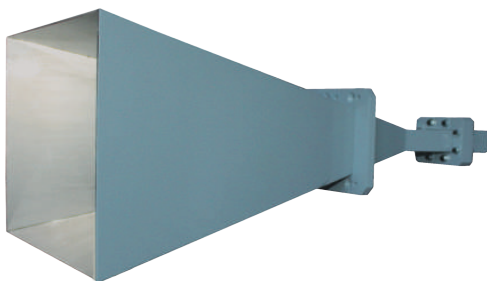
# HIGH PRECISION STANDART GAIN HORN ANTENNAS





# HIGH PRECISION GAIN HORN ANTENNAS AS6.76.1 - AS6.76.6

**39,5 - 40 GHz**



Recommended for metrological applications and experimental researches.

AS6.76.x antennas

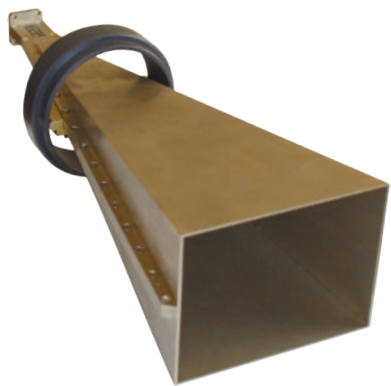
- ✓ Small unevenness of the gain and VSWR;
- ✓ Error of gain measurement:  $\pm 1$  dB; or  $\pm 0,3$  dB;
- ✓ Available with different types of output connector;
- ✓ Ideal for use in the composition of planar, cylindrical and spherical scanners.

## AS6.76.1-AS6.76.6 Antennas Specifications

Name	Frequency range	Gain	VSWR	Connector type	Mass	Dimensions
AS6.76.1	3,95 - 5,85 GHz	≥ 19 dB	≤ 1,5	SMA(F)	3,2 kg	600 x 305 x 232 mm
AS6.76.1M				N(F)		
AS6.76.2	5,85 - 8,2 GHz	≥ 21 dB		SMA(F)	2,5 kg	566 x 284 x 188 mm
AS6.76.2M				N(F)		
AS6.76.3	8,2 - 12,4 GHz	≥ 22 dB		SMA(F)	2 kg	502 x 156 x 206 mm
AS6.76.3M				N(F)		
AS6.76.4	12,4 - 18,0 GHz	≥ 23 dB		SMA(F)	1,5 kg	408 x 152 x 115 mm
AS6.76.5	18,0 - 26,5 GHz	≥ 23 dB		K(F)	0,8 kg	300 x 102 x 77 mm
AS6.76.6	26,5 - 40,0 GHz	≥ 23 dB		K(F)	0,56 kg	270 x 62 x 82 mm

# STANDARD GAIN HORN ANTENNAS

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS6.41	Pyramidal standard gain horn antenna.	18 - 26,5 GHz	39
AS6.42	Pyramidal standard gain horn antenna.	26,5 - 40 GHz	40
AS6.43	Pyramidal standard gain horn antenna.	40 - 60 GHz	41
AS6.44	Pyramidal standard gain horn antenna.	50 - 75 GHz	42
AS6.45	Pyramidal standard gain horn antenna.	75 - 110 GHz	43
AS6.14-x	Reconfigurable standard gain horn antenna.	8,2 ÷ 40 GHz	44



PYRAMIDAL STANDARD GAIN  
 HORN ANTENNA  
 AS6.41

18 - 26,5 GHz



AS6.41 is a standard gain horn antenna with linearly polarization that provides an efficient low cost means of making measurements. This horn antenna is ideally suited for EMI testing, antenna gain and pattern measurements.

KG

0,39

°C

-40 +50

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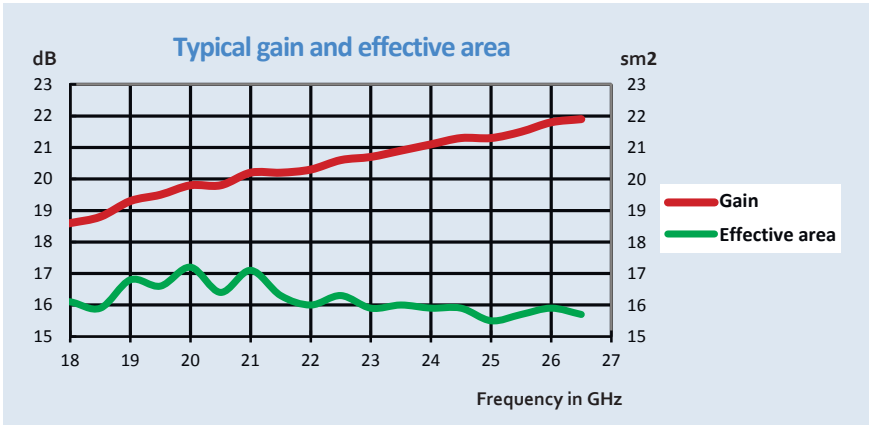
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WR

42

- ✓ Small error of the gain and VSWR;
- ✓ Can be used as a standard antenna.

Specifications			
Frequency range	18 - 26,5 GHz	Dimensions	115,5 x 88 x 315 mm
Gain	≥ 18,4 dB	Polarization	linear
VSWR typical	1,5	Waveguide type	WR42



PYRAMIDAL STANDARD GAIN  
HORN ANTENNA  
AS6.42



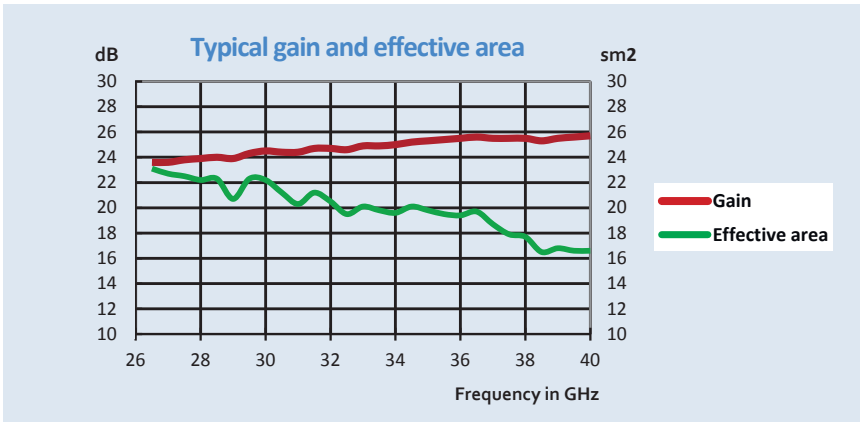
AS6.42 is a standard gain horn antenna with linearly polarization that provides an efficient low cost means of making measurements.

This horn antenna is ideally suited for EMI testing, antenna gain and pattern measurements.



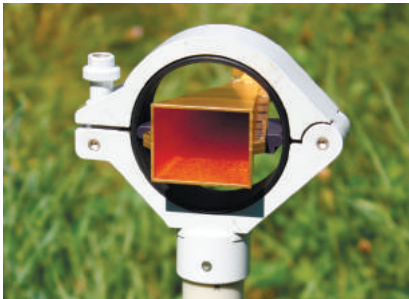
- ✓ Small error of the gain and VSWR;
- ✓ Can be used as a standard antenna.

Specifications			
Frequency range	26,5 - 40 GHz	Dimensions	212 x 82,5 x 56 mm
Gain	≥ 23,6 dB	Polarization	linear
VSWR typical	1,5	Waveguide type	WR28



PYRAMIDAL STANDARD GAIN  
HORN ANTENNA  
AS6.43

40 - 60 GHz

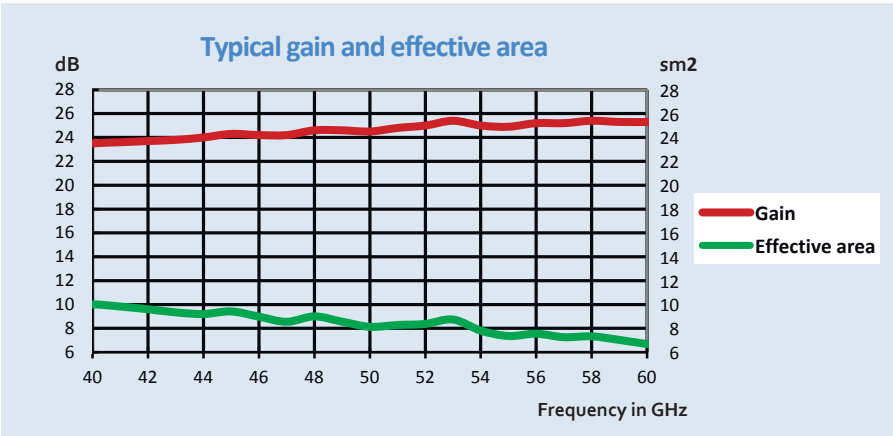


AS6.43 is a standard gain horn antenna with linearly polarization that provides an efficient low cost means of making measurements. This horn antenna is ideally suited for EMI testing, antenna gain and pattern measurements.



- ✓ Small error of the gain and VSWR;
- ✓ Can be used as a standard antenna.

Specifications			
Frequency range	40 - 60 GHz	Dimensions	155 x 61,5 x 40 mm
Gain	≥ 22 dB	Polarization	linear
VSWR typical	1,5	Waveguide type	WR19



PYRAMIDAL STANDARD GAIN  
HORN ANTENNA  
AS6.44

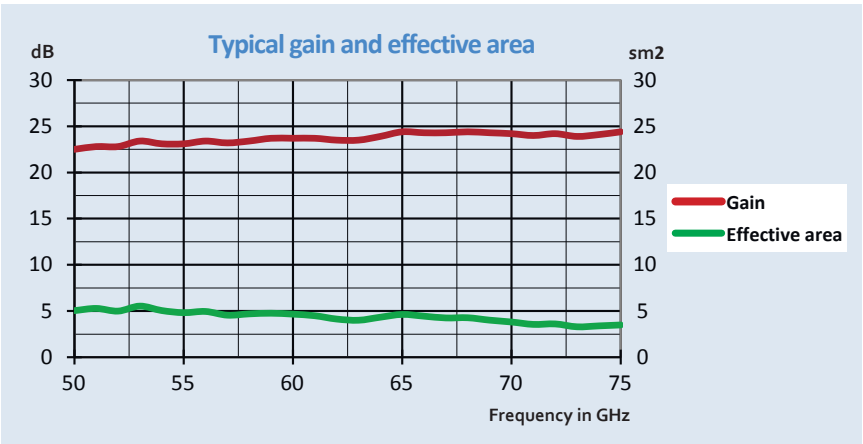


AS6.44 is a standard gain horn antenna with linearly polarization that provides an efficient low cost means of making measurements.

This horn antenna is ideally suited for EMI testing, antenna gain and pattern measurements.

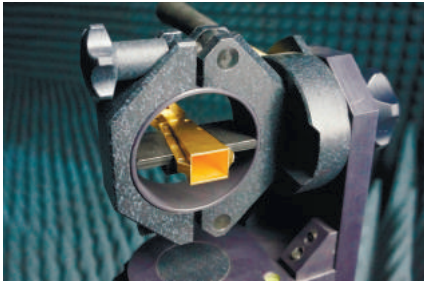
- ✓ Small error of the gain and VSWR;
- ✓ Can be used as a standard antenna.

Specifications			
Frequency range	50 - 75 GHz	Dimensions	112,5 x 51,4 x 34 mm
Gain	≥ 22,5 dB	Polarization	linear
VSWR typical	1,5	Waveguide type	WR15



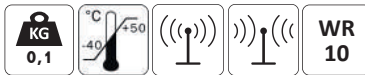
# PYRAMIDAL STANDARD GAIN HORN ANTENNA AS6.45

75 - 110 GHz



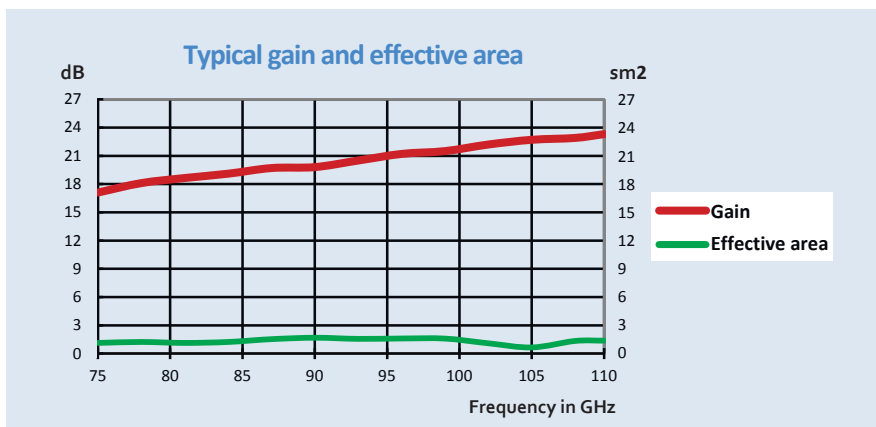
AS6.45 is a standard gain horn antenna with linearly polarization that provides an efficient low cost means of making measurements.

This horn antenna is ideally suited for EMI testing, antenna gain and pattern measurements.



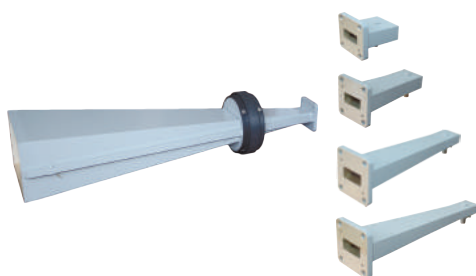
- ✓ Small error of the gain and VSWR;
- ✓ Can be used as a standard antenna.

Specifications			
Frequency range	75 - 110 GHz	Dimensions	77,5 x 33,9 x 20 mm
Gain	≥ 19,8 dB	Polarization	linear
VSWR typical	1,2	Waveguide type	WR10



8,2 ÷ 40 GHz

## RECONFIGURABLE STANDARD GAIN HORN ANTENNA AS6.14-x



Base horn AS6.14 and set of feeder devices.



Antenna in configuration number 3.



Recommended for metrological applications and evaluation objectives of EMC and TEMPEST.

Reconfigurable antenna AS6.14-x is an antenna system consisting of WR-90 basic waveguide horn antenna and of 4 removable feeder devices on the appropriate frequency range.

The removable feeder device is a waveguide-coax adapter integrated with waveguide transition section (WR to WR).

To perform measurements feeder range must be attached to the base horn.

In assembled form, the antenna is a standard gain horn antenna of the appropriate range.

Configuration	Frequency range	Equipment	
		Base horn	Feeder devices
AS6.14-1	8,2 ÷ 12,4 GHz	AS6.14 - WR-90 waveguide horn antenna	Waveguide-coax adapter WR90 - SMA(f)
AS6.14-2	12,4 ÷ 18,0 GHz		Transition section WR90 - WR62 - SMA(f)
AS6.14-3	18,0 ÷ 26,5 GHz		Transition section WR90 - WR42 - K(f)
A6.14-4	26,5 ÷ 40,0 GHz		Transition section WR90 - WR28 - K(f)

- ✓ Has a high uniformity of the gain and VSWR.
- ✓ Ideal for measuring parameters of antenna devices and parameters of electromagnetic compatibility of radio-electronic instruments.



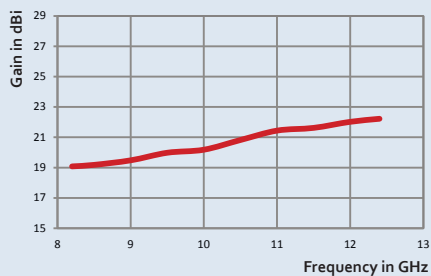
# RECONFIGURABLE STANDARD GAIN HORN ANTENNA AS6.14-x

8,2 ÷ 40 GHz

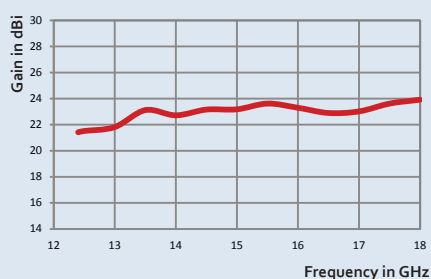
Specifications				
	Configuration			
	AS6.14-1	AS6.14-2	AS6.14-3	AS6.14-4
Frequency range	8,2 - 12,4 GHz	12,4 - 18,0 GHz	18,0 - 26,5 GHz	26,5 - 40,0 GHz
Gain in frequency range	≥ 17,0 dB	≥ 18,0 dB	≥ 23,0 dB	≥ 25,0 dB
Margin of error gain	± 1,2 dB			
VSWR input	≤ 1,6			
Dimensions (length x width x height)	455 x 88 x 138 mm	504 x 88 x 138 mm	564 x 88 x 138 mm	572 x 88 x 138 mm
Mass	0,97 kg	1 kg	1,04 kg	1,03 kg

## Typical gain

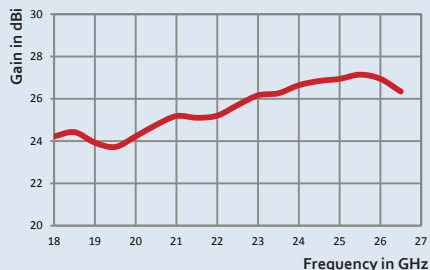
AS6.14-1



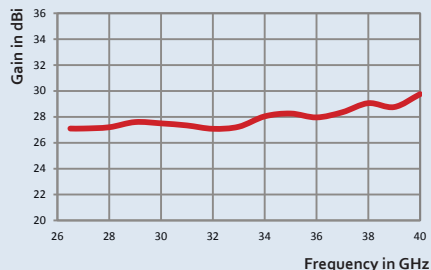
AS6.14-2



AS6.14-3



AS6.14-4



# DOUBLE-RIDGED WAVEGUIDE HORN ANTENNAS

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS6.59	Ultra-broadband double-ridged waveguide horn antenna.	370 MHz - 6 GHz	47
AS6.17	Double-ridged waveguide horn antenna.	0,9 - 12,4 GHz	48
AS6.58.1	Double-ridged waveguide horn antenna.	0,8 - 18 GHz	49
AS6.58.2	Ultra-broadband double-ridged waveguide horn antenna.	0,8 - 22,5 GHz	50
AS6.18	Double-ridged waveguide horn antenna.	1 - 12 GHz	51
AS6.16	Double-ridged waveguide horn antenna.	2 - 18 GHz	52
AS6.19	Double-ridged waveguide horn antenna.	8 - 18 GHz	53
AS6.10	Double-ridged waveguide horn antenna.	12 - 40 GHz	54



# ULTRA-BROADBAND DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA AS6.59

**370 MHz - 6 GHz**

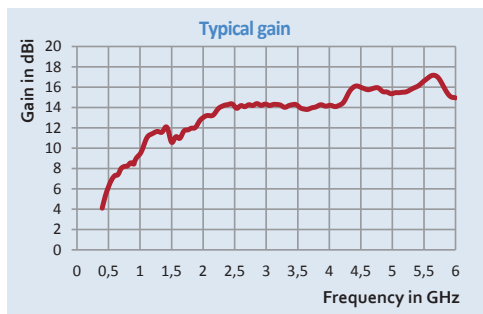


AS6.59 is a broadband waveguide horn antenna with linear polarization that provides an efficient low cost means of broadband measurements.

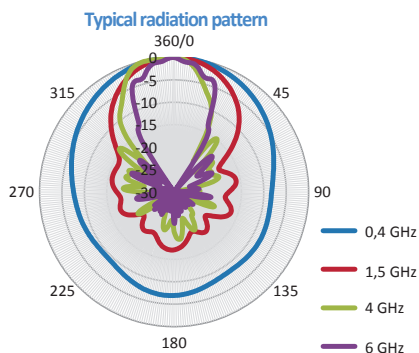
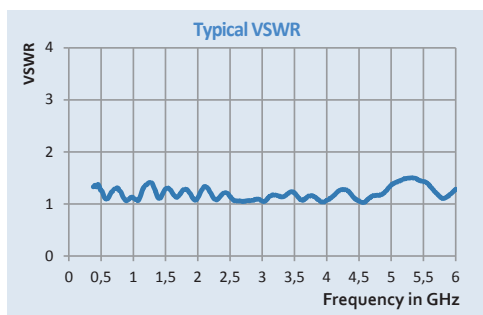
This horn antenna is ideally suited for EMI testing, antenna gain or pattern measurements and other Hi-tech applications.



✓ Allows to measure ultra-wideband signal of short duration.



Specifications	
Frequency range	370 MHz- 6GHz
Gain	from 4 to 17 dB
VSWR typical	1,5
Dimensions	484x 357x 270 mm
Margin of error gain	± 1,5dB



0,9 - 12,4 GHz

DOUBLE-RIDGED WAVEGUIDE  
HORN ANTENNA  
AS6.17



AS6.17 is a waveguide horn antenna with linear polarization that provides an efficient low cost means of broadband measurements.

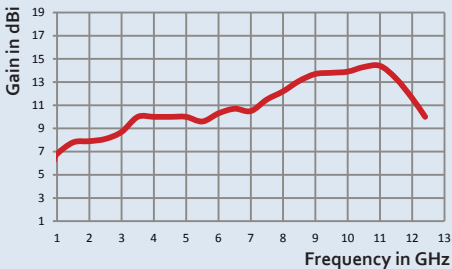
This horn antenna is ideally suited for EMI testing, antenna gain or pattern measurements and other Hi-tech applications.



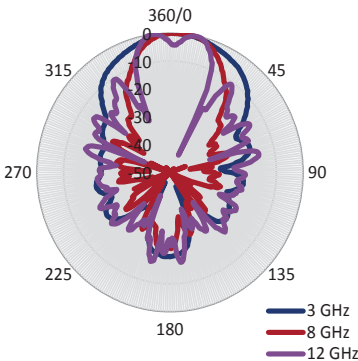
Specifications

Frequency range	0,9 – 12,4 GHz	Dimensions	244 x 240 x 143 mm
Gain	from 6 to 13 dB	Polarization	linear
VSWR typical	2	Margin of error gain	± 2 dB

Typical gain

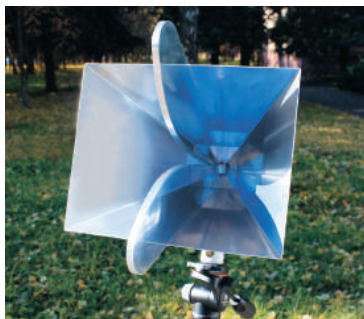


Typical radiation pattern



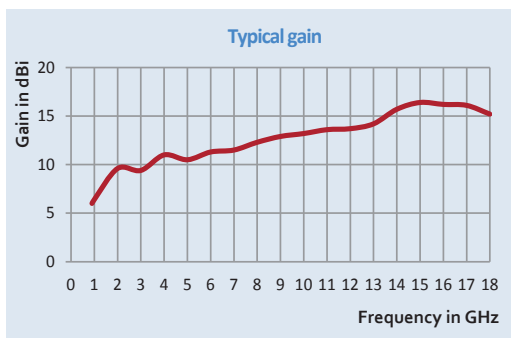
# DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA AS6.58.1

**0,8 - 18 GHz**

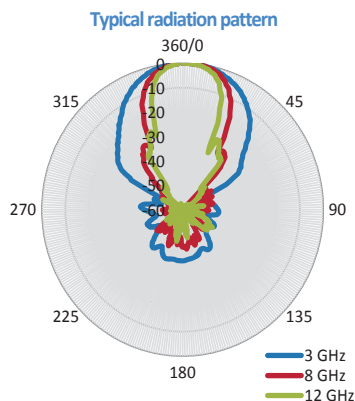
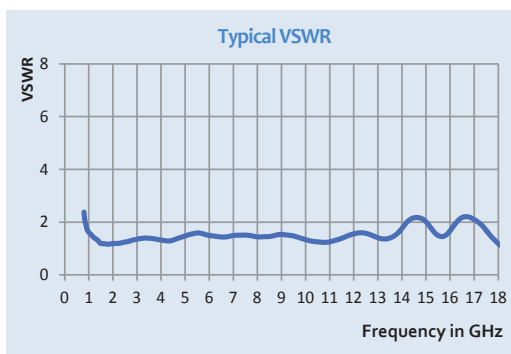


AS6.58.1 is a waveguide horn antenna with linear polarization that provides an efficient low cost means of broadband measurements.

This horn antenna is ideally suited for EMI testing, antenna gain or pattern measurements and other Hi-tech applications.

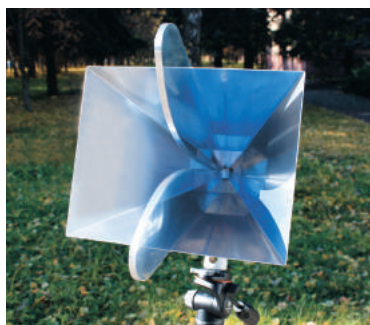


Specifications	
Frequency range	0,8–18 GHz
Gain	from 6 to 17 dB
VSWR typical	1,8
Dimensions	343,5 x 322,5 x 321,5 mm
Polarizations	linear
Margin of error gain	± 2 dB



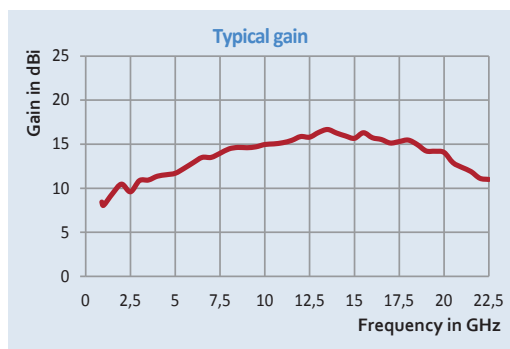
0,8 - 22,5 GHz

## ULTRA-BROADBAND DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA AS6.58.2

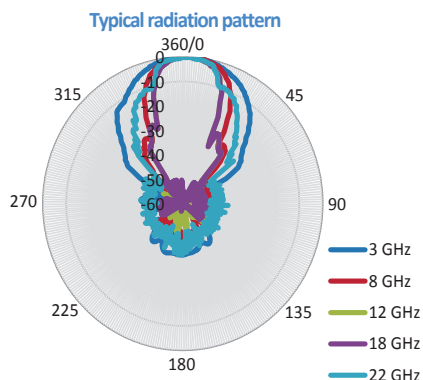
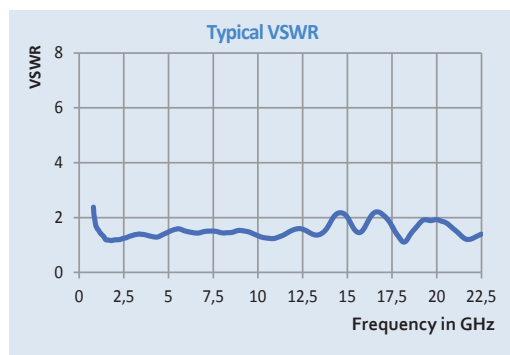


AS6.58.2 is a broadband waveguide horn antenna with linear polarization that provides an efficient low cost means of broadband measurements.

This horn antenna is ideally suited for EMI testing, antenna gain or pattern measurements and other Hi-tech applications.

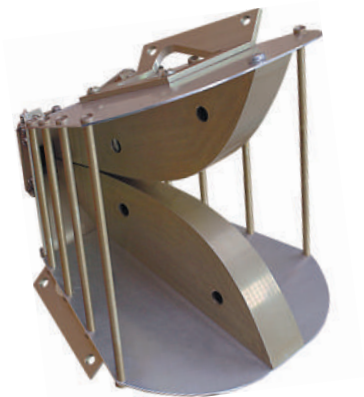


Specifications	
Frequency range	0,8–22,5GHz
Gain	от 8 до 16 dB
VSWR typical	1,8
Dimensions	343,5 x 322,5 x 321,5 mm
Polarization	linear
Margin of error gain	± 2 dB



DOUBLE-RIDGED WAVEGUIDE  
HORN ANTENNA  
AS6.18

1 - 12 GHz

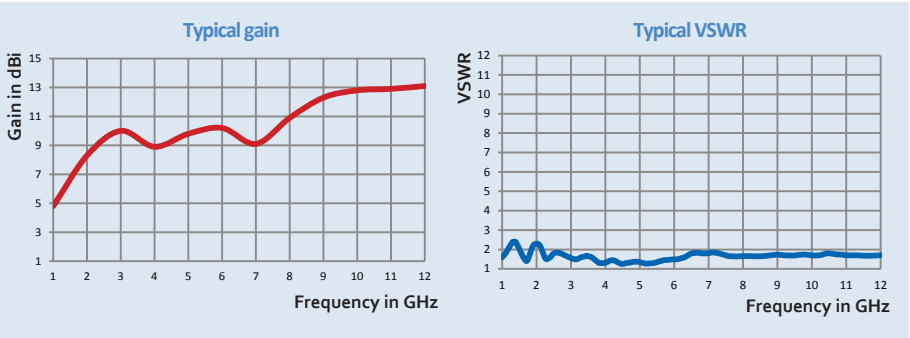


Can be used as an element of multibeam antenna arrays.  
Can be used as drone mountable antenna.



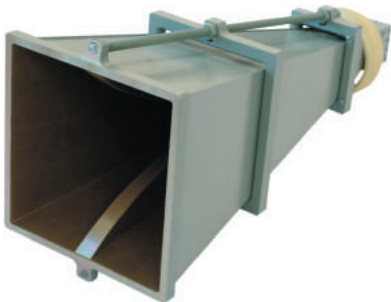
- ✓ Using as measuring antenna is possible;
- ✓ Small mass and dimensions.

Specifications			
Frequency range	1 - 12 GHz	Dimensions	195 x 193 x 155 mm
Gain	from 5 to 13 dB	Polarization	linear
VSWR typical	2	Margin of error, gain	± 2



2 - 18 GHz

# DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA AS6.16



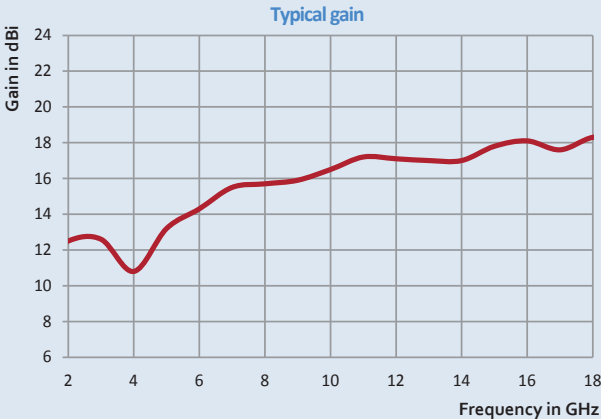
AS6.16 is a waveguide horn antenna with linear polarization that provides an efficient low cost means of broadband measurements.

This horn antenna is ideally suited for EMI testing, antenna gain or pattern measurements and other Hi-tech applications.



## Specifications

Frequency range	2 - 18 GHz	Dimensions	442 x 208 x 178 mm
Gain	from 11 to 18 dB	Polarization	linear
VSWR typical	2	Margin of error gain	± 2 dB





DOUBLE-RIDGED WAVEGUIDE  
HORN ANTENNA  
AS6.19

8 - 18 GHz

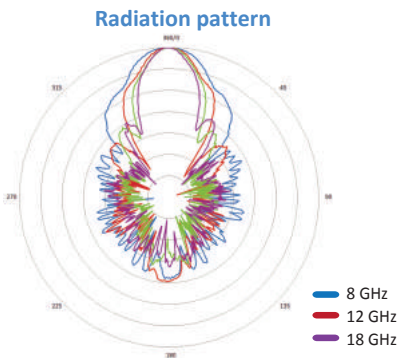
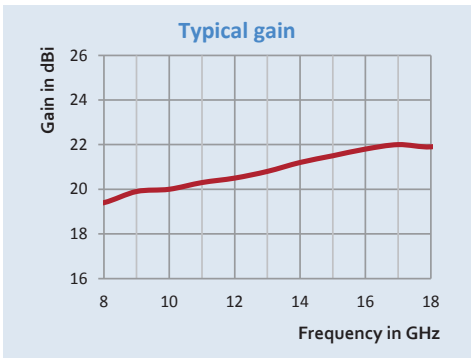


Recommended for metrological applications and evaluation objectives of EMC and TEMPEST.



- ✓ Has a high uniformity of the gain and VSWR. Ideal for measuring the parameters of antenna devices and parameters of electromagnetic compatibility of radio-electronic instruments;
- ✓ Standard antenna.

Specifications			
Frequency range	8 - 18 GHz	Dimensions	436 x 129 x 83 mm
Gain	≥ 19 dB	Polarization	linear
VSWR typical	2	Margin of error gain	± 1,5 dB



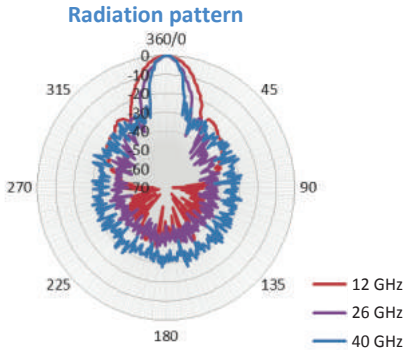
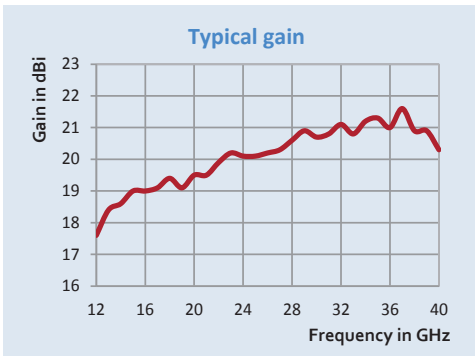
DOUBLE-RIDGED WAVEGUIDE  
HORN ANTENNA  
AS6.10



AS6.10 is a waveguide horn antenna with linear polarization that provides an efficient low cost means of broadband measurements.

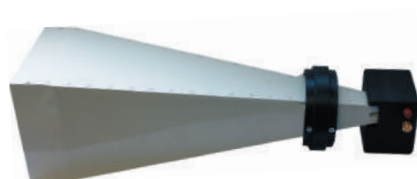
This horn antenna is ideally suited for EMI testing, antenna gain or pattern measurements and other Hi-tech applications.

Specifications			
Frequency range	12 - 40 GHz	Dimensions	378 x 120 x 123 mm
Gain	≥ 17,0 dB	Polarization	linear
VSWR typical	2	Margin of error gain	± 2 dB



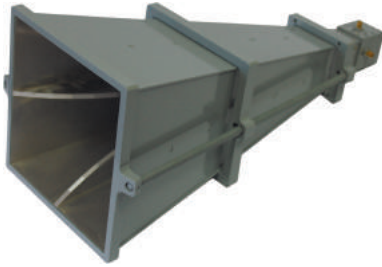
# QUAD-RIDGED WAVEGUIDE HORN ANTENNAS

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS6.15	Quad-ridged waveguide horn antenna (two-channel with biortogonal linear polarization).	2 - 18 GHz	56
AS6.12	Quad-ridged waveguide horn antenna (dual circular polarization).	2 - 15 (18) GHz	57
AS6.11	Quad-ridged waveguide horn antenna.	18 - 40 GHz	58
AS6.13	Quad-ridged waveguide horn antenna (dual circular polarization).	18 - 40 GHz	59
AS6.27	Quad-ridged waveguide horn.	18 - 40 GHz	60



# 2 - 18 GHz

## QUAD-RIDGED WAVEGUIDE HORN ANTENNA (two-channel with biorthogonal linear polarization) AS6.15

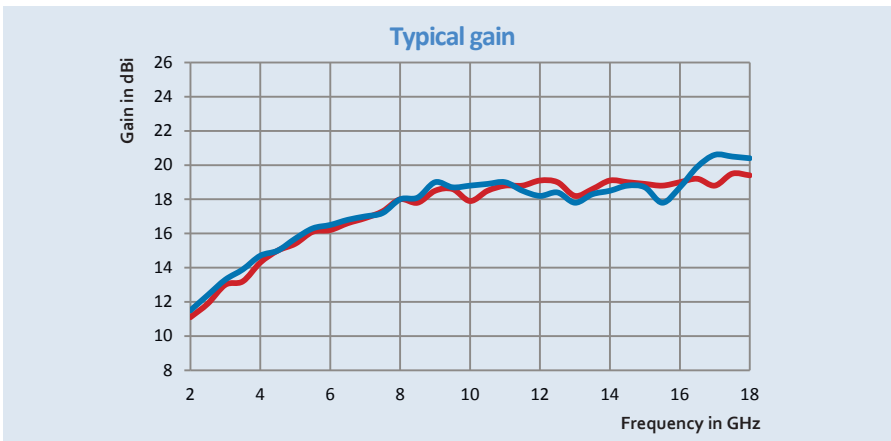


AS6.15 is a broadband waveguide horn antenna with dual polarization that provides an efficient low cost means of broadband measurements. This horn antenna is ideally for EMI testing, antenna gain or pattern measurements and other Hi-Tech applications.



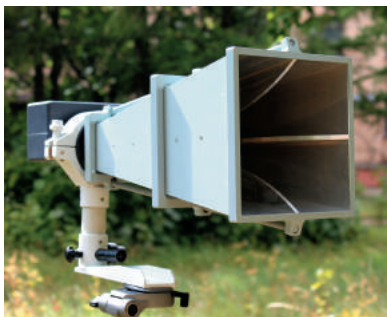
- ✓ Half the time for measurement on both polarization.

Specifications			
Frequency range	2 - 18 GHz	Dimensions	442 x 208 x 178 mm
Gain	from 11 to 18 dB	Margin of error gain	± 2 dB
VSWR typical	2	Polarization	linear: vertical and horizontal
Cross-polarization level	-20 dB		



QUAD-RIDGED WAVEGUIDE HORN ANTENNA  
(dual circular polarization)  
AS6.12

2 - 15 (18) GHz

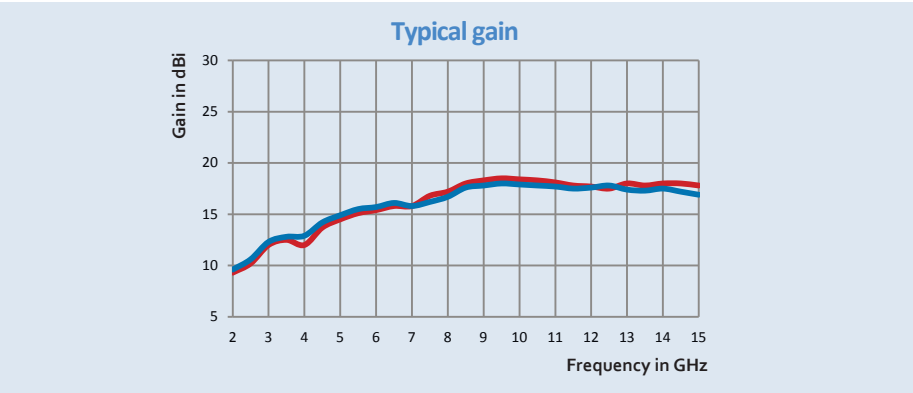


The AS6.13 is dual circular polarization horn antenna for efficient low cost means of making broadband measurements.

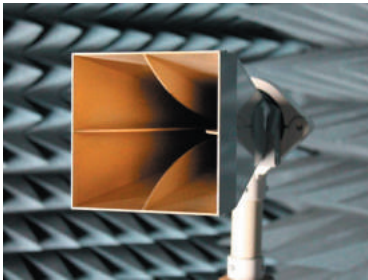


- ✓ Allows to measure ultra-wideband signal of short duration;
- ✓ Allows to receive signals of left hand circularly polarization or right hand circularly polarization.

Specifications			
Frequency range	2 – 15 (18)GHz	Dimensions	464 x 208 x 178 mm
Gain	from 12 to 17 dB	Margin of error gain	± 2 dB
VSWR typical	2	Coefficient of ellipticity	typical: 2 dB ≤ 5 dB
Polarization	circular: left and right rotation	Number of outputs SMA type	2



QUAD-RIDGED WAVEGUIDE  
HORN ANTENNA  
AS6.11

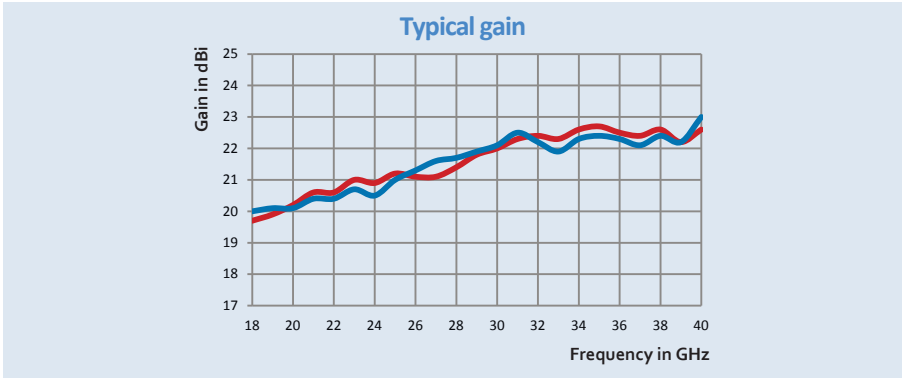


AS6.11 is a broadband waveguide horn antenna with dual polarization that provides an efficient low cost means of broadband measurements. This horn antenna is ideally for EMI testing, antenna gain or pattern measurements and other Hi-Tech applications.



- ✓ Half the time for measurement on both polarization.

Specifications			
Frequency range	18 - 40 GHz	Cross-polarization level	-20 dB
Gain	≥ 18,0 dB	Dimensions	378 x 120 x 123 mm
VSWR typical	2,0	Margin of error gain	± 2 dB
Polarization	linear: vertical, horizontal		



# QUAD-RIDGED WAVEGUIDE HORN ANTENNA (dual circular polarization) AS6.13

18 - 40 GHz

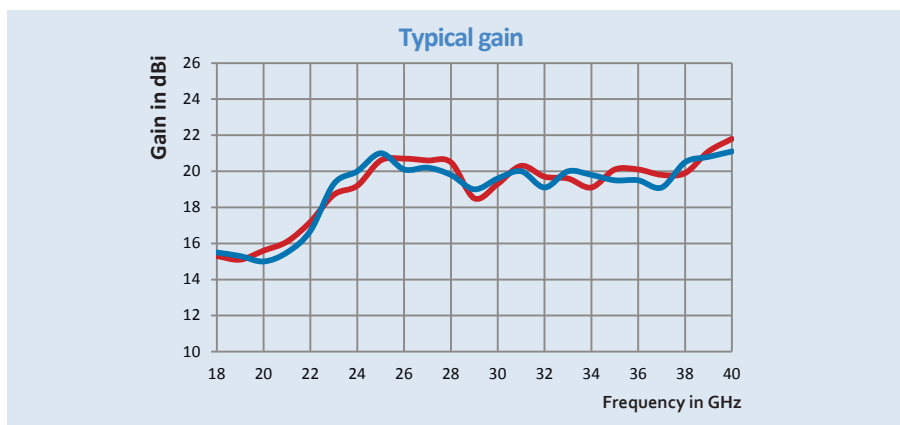


The AS6.13 is dual circular polarization horn antenna for efficient low cost means of making broadband measurements.



- ✓ Allows to receive signals of left hand circularly polarization or right hand circularly polarization.

Specifications			
Frequency range	18 - 40 GHz	Dimensions	401 x120x 123 mm
Gain	$\geq 15,0$ dB	Margin of error gain	$\pm 2$ dB
VSWR typical	2	Coefficient of ellipticity	typical 2 dB; $\leq 5$ dB
Polarization	circular: left and right rotation	Number of outputs K-type	2

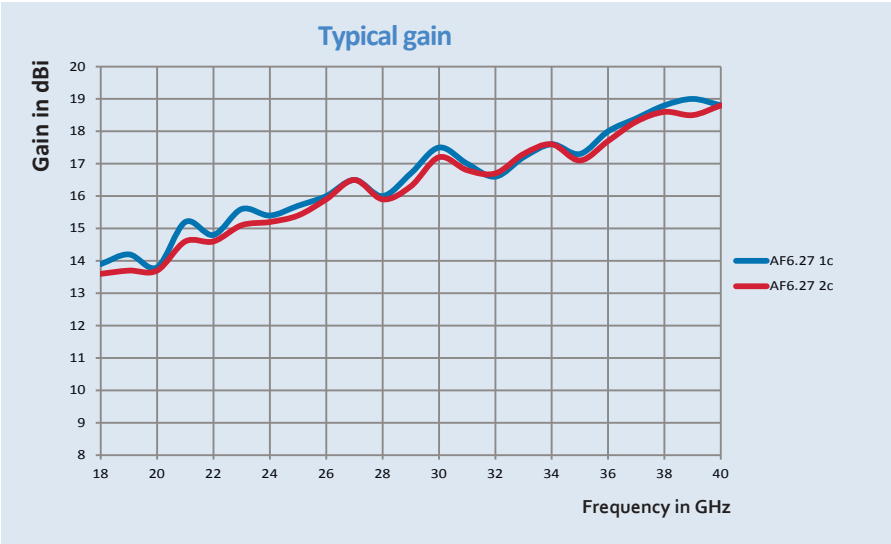




Recommended for using as feeders of parabolic and offset antennas, as well as Cassegrain antennas.



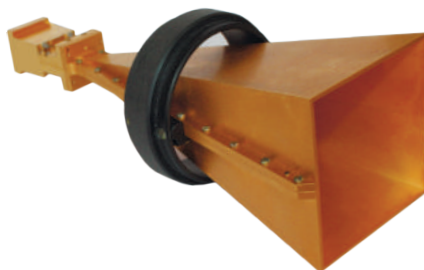
Specifications			
Frequency range	18 - 40 GHz	Dimensions	66 x 40 x 40 mm
Crosspolarization	≥ -18 dB	VSWR typical	2,5
Gain	≥ 12 dB	Polarization	linear: vertical, horizontal





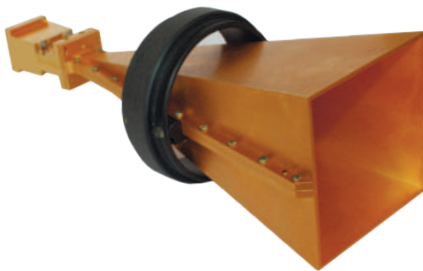
# SQUARE APERTURE PYRAMIDAL HORN ANTENNAS WITH A ORTHOMODE TRANSDUCER

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS6.73.1- AS6.73.2	Square aperture pyramidal horn antennas with a orthomode transducer.	18 - 26,5 GHz	62
AS6.74.1- AS6.74.2	Square aperture pyramidal horn antennas with a orthomode transducer.	26,5 - 40 GHz	63
AS6.75.1- AS6.75.2	Square aperture pyramidal horn antennas with a orthomode transducer.	40 - 60 GHz	64

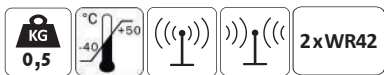


18 - 26,5 GHz

SQUARE APERTURE PYRAMIDAL HORN ANTENNAS  
WITH A ORTHOMODE TRANSDUCER  
AS6.73.1-AS6.73.2



AS6.73 is a dual ortomode polarized horn antenna for efficient low cost means of broadband measurements. Separate two orthogonal linearly polarization and two orthogonal circular polarization (RHCP, LHCP)

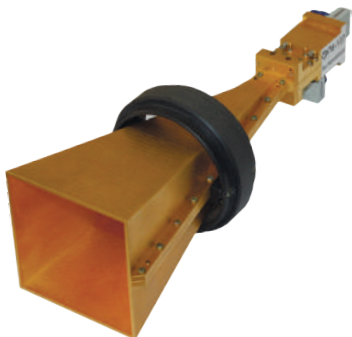


- ✓ Produces with two models of orthomode transducers;
- ✓ Half the time for measurement on vertical and horizontal (AS6.73.1) or LHCP and RHCP (AS6.73.2).

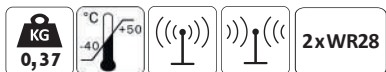
Specifications	AS6.73.1	AS6.73.2
Frequency range	18 - 26,5 GHz	
Polarization	linear: vertical, horizontal	circular: left and right hand
Cross-polarization level	≥ 20 dB	
Number of wave outputs	2	
Type of wave outputs	WR42	
VSWR typical	2	
Dimensions	342 x 103 x 116 mm	

# SQUARE APERTURE PYRAMIDAL HORN ANTENNAS WITH A ORTHOMODE TRANSDUCER AS6.74.1-AS6.74.2

26,5 - 40 GHz



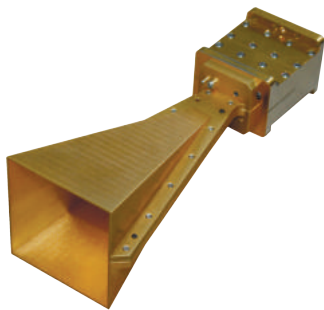
AS6.74 is a dual ortmode polarized horn antenna for efficient low cost means of broadband measurements. Separate two orthogonal linearly polarization and two orthogonal circular polarization (RHCP, LHCP)



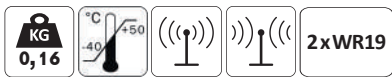
- ✓ Produces with two models of orthomode transducers;
- ✓ Half the time for measurement on vertical and horizontal (AS6.74.1) or LHCP and RHCP (AS6.74.2).

Specifications	AS6.74.1	AS6.74.2
Frequency range	26,5 - 40 GHz	
Polarization	linear: vertical, horizontal	circular: left and right hand
Cross-polarization level	≥ 20 dB	
Number of wave outputs	2	
Type of wave outputs	WR28	
VSWR typical	2	
Dimensions	263 x 79 x 89 mm	

SQUARE APERTURE PYRAMIDAL HORN ANTENNAS  
WITH A ORTHOMODE TRANSDUCER  
AS6.75.1-AS6.75.2



AS6.73 is a dual ortomode polarized horn antenna for efficient low cost means of broadband measurements.  
Separate two orthogonal linearly polarization and two orthogonal circular polarization (RHCP, LHCP)



- ✓ Produces with two models of orthomode transducers;
- ✓ Half the time for measurement on vertical and horizontal (AS6.73.1) or LHCP and RHCP (AS6.73.2).

Specifications	AS6.75.1	AS6.75.2
Frequency range	40 - 60 GHz	
Polarization	linear: vertical, horizontal	circular: left and right hand
Cross-polarization level	≥ 20 dB	
Number of wave outputs	2	
Type of wave outputs	WR19	
VSWR typical	2	
Dimensions	157 x 58 x 47,7 mm	

# CONICAL HORN ANTENNAS

Product	Description	Frequency range	Page
AF6.35	Narrow beam scalar horn antennas.	8,2 - 110 GHz	66
AF6.36	Wide beam scalar horn antennas.	8,2 - 110 GHz	69



# NARROW BEAM SCALAR HORN ANTENNAS AF6.35



Recommended for using as feeders of parabolic and offset antennas, as well as Cassegrain antennas with any F/D relation.



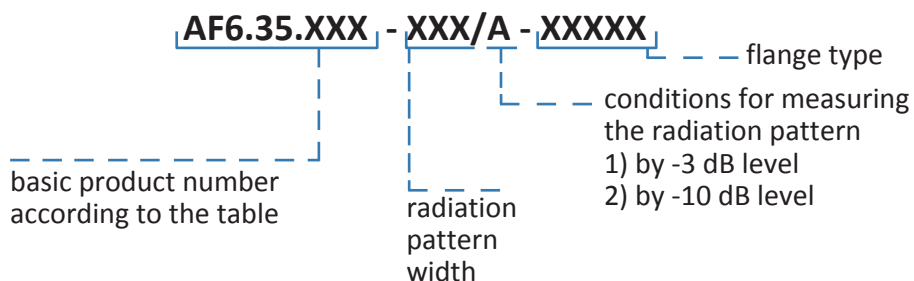
- ✓ The beam-width is specified by the customer in range from 10° to 60° by -3 dB or -10 dB level;
- ✓ Antennas have high identity radiation pattern in E and H planes, low sides lobe level and high level of cross-polarization denouement.

Specifications	
Beam-width	10 ÷ 60 degrees
Allowable width difference RP in E and H planes	+/- 1,5 dB from main lobe
Typical side lobes level	25 dB
Cross-polarization	30 dB
VSWR	≤1,3

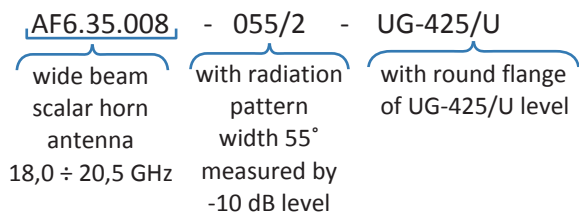
## Nomenclature of AF6.35 antennas

Base product number	Frequency range, GHz	Waveguide diameter (in/mm)	Recommended flange	
			designation	type
AF6.35.001	8,2 – 9,97	1,094/27,79	UBR100 (UG-39/U)	square
AF6.35.002	8,5 – 11,6	0,938/23,83		
AF6.35.003	9,97 – 12,4	0,797/20,24		
AF6.35.004	12,4 – 15,9	0,764/19,4	UG-419/U	square
AF6.35.005	13,4 – 18,0	0,688/17,48		
AF6.35.006	15,9 – 18,0	0,500/12,7		
AF6.35.007	17,0 – 22,0	0,500/12,7	UG-595/U or UG-425/U	square
AF6.35.008	18,0 – 20,5	0,455/11,56		
AF6.35.009	20,0 – 24,5	0,396/10,06		
AF6.35.010	21,0 – 27,0	0,396/10,06	UG-425/U	round
AF6.35.011	24,0 – 26,5	0,328/8,33		
AF6.35.012	25,0 – 33,0	0,328/8,33		
AF6.35.013	25,0 – 33,0	0,328/8,33	UG-599/U or UG-381/U	square
AF6.35.014	26,5 – 33,0	0,315/8,00		
AF6.35.015	33,0 – 38,5	0,250/6,35		
AF6.35.016	33,0 – 44,0	0,250/6,35	UG-381/U	round
AF6.35.017	38,5 – 40,0	0,219/5,56		
AF6.35.018	33,0 – 38,5	0,250/6,35		
AF6.35.019	33,0 – 44,0	0,250/6,35	UG-383/U	round
AF6.35.020	38,0 – 50,0	0,219/5,56		
AF6.35.021	38,5 – 43,0	0,219/5,56		
AF6.35.022	43,0 – 50,0	0,188/4,78	UG-383/U mod	round
AF6.35.023	43,0 – 58,0	0,188/4,78		
AF6.35.024	38,0 – 50,0	0,219/5,60		
AF6.35.025	40,0 – 43,0	0,210/5,33	UG-383/U mod	round
AF6.35.026	43,0 – 50,0	0,188/4,78		
AF6.35.027	43,0 – 58,0	0,188/4,78		
AF6.35.028	50,0 – 60,0	0,165/4,19	UG-385/U	round
AF6.35.029	58,0 – 77,0	0,141/3,60		
AF6.35.030	43,0 – 58,0	0,188/4,78		
AF6.35.031	50,0 – 58,0	0,165/4,19	UG-383/U mod	round
AF6.35.032	58,0 – 68,0	0,141/3,58		
AF6.35.033	58,0 – 77,0	0,141/3,58		
AF6.35.034	68,0 – 75,0	0,125/3,18	UG-385/U	round
AF6.35.035	58,0 – 77,0	0,141/3,58		
AF6.35.036	60,0 – 66,0	0,136/3,45		
AF6.35.037	66,0 – 82,0	0,125/3,18	UG-387/U	round
AF6.35.038	66,0 – 88,0	0,125/3,18		
AF6.35.039	75,0 – 110,0	0,109/2,80		
AF6.35.040	82,0 – 90,0	0,094/2,39	UG-387/U mod	round
AF6.35.041	75,0 – 88,0	0,112/2,84		
AF6.35.042	75,0 – 110,0	0,109/2,80		
AF6.35.043	88,0 – 90,0	0,094/2,39	UG-387/U mod	round
AF6.35.044	88,0 – 110,0	0,094/2,39		

## Ordering information



### Example:





## WIDE BEAM SCALAR HORN ANTENNAS AF6.36

8,2 - 110 GHz



Recommended for using as feeders of parabolic and offset antennas, as well as Cassegrain antennas with any F/D relation.



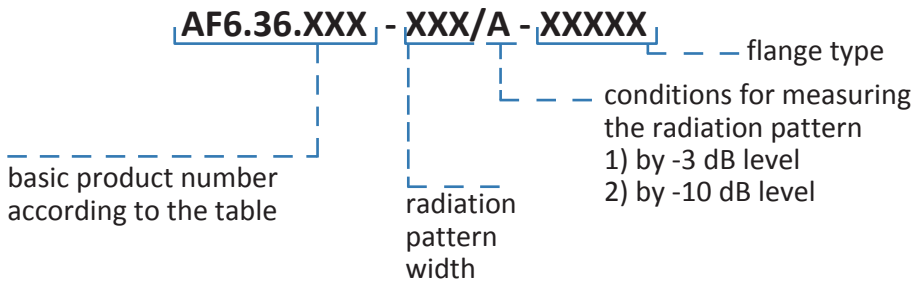
- ✓ The beam-width is specified by the customer in range from 40° to 100° by -3 dB or -10 dB level;
- ✓ Antennas have high identity radiation patterns in E and H planes, low sides lobe level and high level of cross-polarization denouement.

Specifications	
Beam-width	40 ÷ 100 degrees
Allowable width difference RP in E and H planes	+/- 1,5 dB from main lobe
Typical side lobes level	25 dB
Cross-polarization	30 dB
VSWR	≤1,3

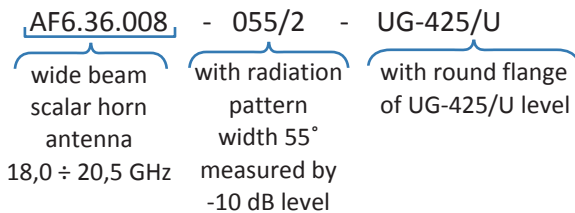
## Nomenclature of AF6.36 antennas

Base product number	Frequency range, GHz	Waveguide diameter (in/mm)	Recommended flange	
			designation	type
AF6.36.001	8,2 – 9,97	1,094/27,79	UBR100 (UG-39/U)	square
AF6.36.002	8,5 – 11,6	0,938/23,83		
AF6.36.003	9,97 – 12,4	0,797/20,24		
AF6.36.004	12,4 – 15,9	0,764/19,4	UG-419/U	square
AF6.36.005	13,4 – 18,0	0,688/17,48		
AF6.36.006	15,9 – 18,0	0,500/12,7		
AF6.36.007	17,0 – 22,0	0,500/12,7	UG-595/U or UG-425/U	square
AF6.36.008	18,0 – 20,5	0,455/11,56		
AF6.36.009	20,0 – 24,5	0,396/10,06		
AF6.36.010	21,0 – 27,0	0,396/10,06		
AF6.36.011	24,0 – 26,5	0,328/8,33		
AF6.36.012	25,0 – 33,0	0,328/8,33	UG-599/U or UG-381/U	square
AF6.36.013	25,0 – 33,0	0,328/8,33		
AF6.36.014	26,5 – 33,0	0,315/8,00		
AF6.36.015	33,0 – 38,5	0,250/6,35		
AF6.36.016	33,0 – 44,0	0,250/6,35		
AF6.36.017	38,5 – 40,0	0,219/5,56	UG-383/U	round
AF6.36.018	33,0 – 38,5	0,250/6,35		
AF6.36.019	33,0 – 44,0	0,250/6,35		
AF6.36.020	38,0 – 50,0	0,219/5,56		
AF6.36.021	38,5 – 43,0	0,219/5,56		
AF6.36.022	43,0 – 50,0	0,188/4,78	UG-383/U mod	round
AF6.36.023	43,0 – 58,0	0,188/4,78		
AF6.36.024	38,0 – 50,0	0,219/5,60		
AF6.36.025	40,0 – 43,0	0,210/5,33		
AF6.36.026	43,0 – 50,0	0,188/4,78		
AF6.36.027	43,0 – 58,0	0,188/4,78		
AF6.36.028	50,0 – 60,0	0,165/4,19		
AF6.36.029	58,0 – 77,0	0,141/3,60		
AF6.36.030	43,0 – 58,0	0,188/4,78	UG-383/U mod	round
AF6.36.031	50,0 – 58,0	0,165/4,19		
AF6.36.032	58,0 – 68,0	0,141/3,58		
AF6.36.033	58,0 – 77,0	0,141/3,58		
AF6.36.034	68,0 – 75,0	0,125/3,18		
AF6.36.035	58,0 – 77,0	0,141/3,58	UG-387/U	round
AF6.36.036	60,0 – 66,0	0,136/3,45		
AF6.36.037	66,0 – 82,0	0,125/3,18		
AF6.36.038	66,0 – 88,0	0,125/3,18		
AF6.36.039	75,0 – 110,0	0,109/2,80		
AF6.36.040	82,0 – 90,0	0,094/2,39	UG-387/U mod	round
AF6.36.041	75,0 – 88,0	0,112/2,84		
AF6.36.042	75,0 – 110,0	0,109/2,80		
AF6.36.043	88,0 – 90,0	0,094/2,39		
AF6.36.044	88,0 – 110,0	0,094/2,39		

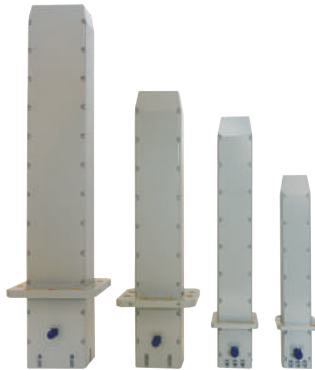
## Ordering information



### Example:

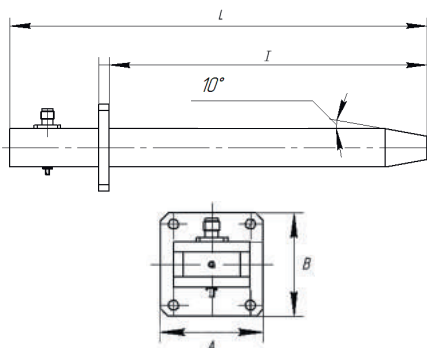


# OPEN ENDED WAVEGUIDE PROBES



# OPEN ENDED WAVEGUIDE PROBES AP6.52.1-AP6.52.11

0,75 - 40 GHz



- ✓ Ideal for antenna's measurements;
- ✓ Available with different mounting options;
- ✓  $VSWR \leq 1,4$ .

Part number	Waveguide standard	Cross section of the waveguide (mm)		Bandwidth (GHz)	Dimensions (mm)				Weight (kg)	Connector
		a	B		A	B	L	I		
AP6.52.1	WR975	247,65	123,82	0,75-1,12	337	213	1100	940	17,0	N/SMA
AP6.52.2	WR770	195,58	97,79	0,96-1,45	285	187,4	1116	813	15,7	N/SMA
AP6.52.3	WR510	129,54	64,77	1,45-2,2	185	120	780	635	4,4	N/SMA
AP6.52.4	WR340	86,36	43,18	2,2-3,3	138,2	95,3	560	458	2,2	N/SMA
AP6.52.5	WR229	58,17	29,08	3,3-4,9	98,4	69,9	390	305	1,0	N/SMA
AP6.52.6	WR159	40,39	20,193	4,9-7,05	81	61,9	290	230	0,6	N/SMA
AP6.52.7	WR112	28,5	12,64	7,05-10	47,8	47,8	260	220	0,46	N/SMA
AP6.52.8	WR90	22,86	10,16	8,2-12,4	41,4	41,4	200	152,4	0,34	N
AP6.52.9	WR62	15,799	7,899	12,4-18	Diameters 101,5		200	156	0,28	SMA/K
AP6.52.10	WR42	10,668	4,318	18-26,5			190	152	0,42	K
AP6.52.11	WR28	7,112	3,556	26,5-40			190	149	0,38	K

# OMNIDIRECTIONAL HORN-REFLECTOR ANTENNAS

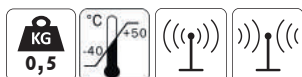


## BROADBAND OMNIDIRECTIONAL HORN-REFLECTOR ANTENNAS AS6.47 - AS6.51

**18 - 110 GHz**



AS6.47 – AS6.51 are horn-reflect waveguide antennas for surveillance and EMI testing that were designed to transmit and receive signal on the omnidirectional radiation.



- ✓ Wide frequency range;
- ✓ Circular polar pattern;
- ✓ Small mass and dimensions.

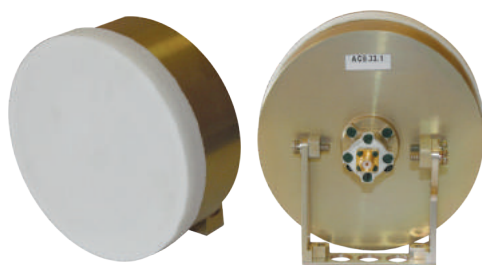
### Specifications

Gain	≤ 3 dB
VSWR typical	2
Polarization	linear

Nº	Name	Frequency range	Standard waveguide outputs	Mass	Dimensions
1	AS6.47	18 - 26 GHz	WR 42	465 g	170 x Ø 80 mm
2	AS6.48	26 - 40 GHz	WR 28	239 g	133 x Ø 66 mm
3	AS6.49	40 - 60 GHz	WR 19	242 g	119 x Ø 66 mm
4	AS6.50	60 - 90 GHz	WR 12	231 g	121,5 x Ø 66 mm
5	AS6.51	90 - 110 GHz	WR 10	232 g	121,5 x Ø 66 mm

# SPIRAL ANTENNAS

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
AS8.72.1- AS8.72.2	Circularly polarized spiral antennas.	0,5 - 18 (26) GHz	77
AS8.33.1- AS8.33.2	Circularly polarized spiral antennas.	0,9 - 18 (26) GHz	78
AS8.37.1- AS8.37.2	Circularly polarized spiral antennas.	18 - 40 GHz	79





CIRCULARLY POLARIZED SPIRAL ANTENNAS  
AS8.72.1-AS8.72.2

0,5 - 18 (26) GHz



AS8.72.1 – right hand circularly polarized.

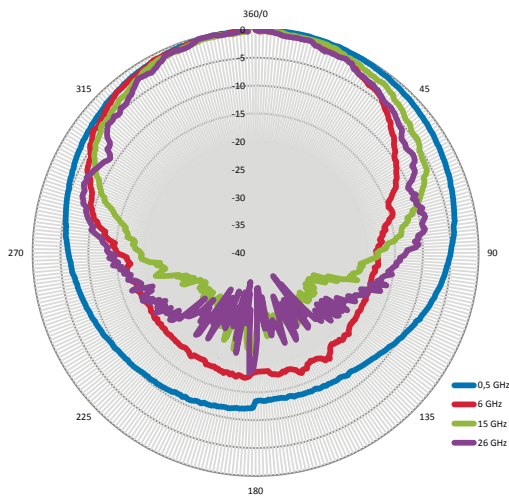
AS8.72.2 – left hand circularly polarized.

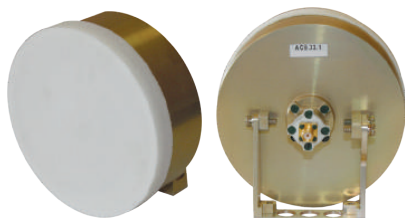


✓ Recommended as an element of multibeam antenna arrays.

Specifications			
Frequency range	0,5 – 18 (26) GHz	Dimensions	D = 150 mm L = 118 mm
Gain typical	≥ -3 dB	Polarization	circular
VSWR typical	2	Coefficient of ellipticity typical	2 dB

Radiation pattern





AS8.33 is a cavity backed circularly polarized spiral broadband antenna designed for EMC, surveillance, directional finding and antenna testing.

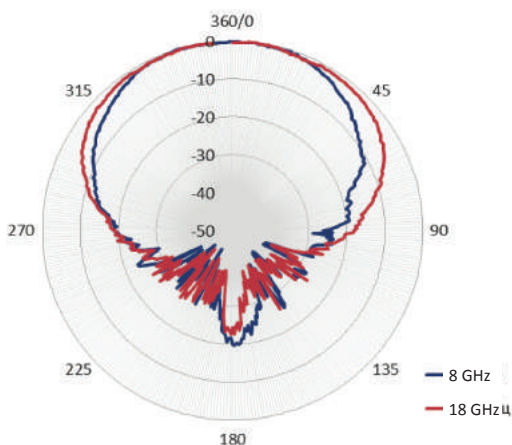
These spirals can be used as separated components of antenna or as broadband feeders for reflector type dish antennas.



- ✓ Recommended as an element of antenna arrays;
- ✓ Available with RHCP and LHCP.

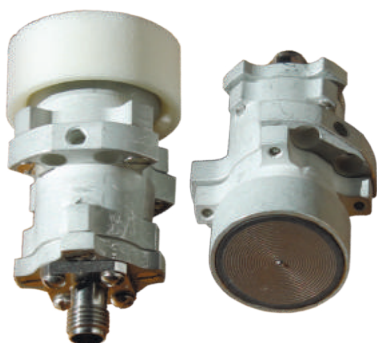
Specifications			
Frequency range	0,9 – 18 (26) GHz	Dimensions	D = 100 mm L = 35 mm
Gain typical	≥ -3 dB	Polarization	circular
VSWR typical	2	Coefficient of ellipticity typical	2 dB

Radiation pattern



## CIRCULARLY POLARIZED SPIRAL ANTENNAS AS8.37.1-AS8.37.2

**18 - 40 GHz**



AS8.37 are cavity backed circularly polarized spiral broadband antennas designed for EMC, surveillance, directional finding and antenna testing.

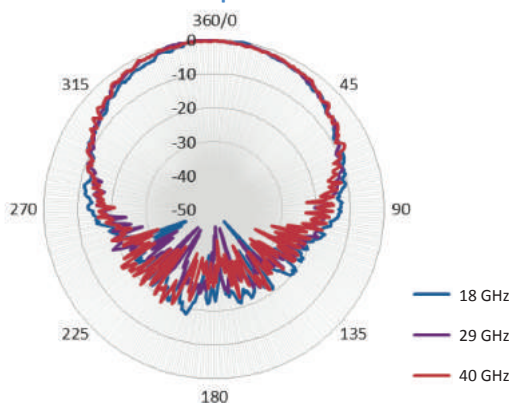
These spirals can be used as separated components of antenna or as broadband feeders for reflector type dish antennas.



- ✓ Recommended as elements of antenna arrays;
- ✓ Available with RHCP and LHCP.

Specifications			
Frequency range	18 – 40 GHz	Dimensions	D = 25 mm L = 45mm
Gain typical	≥ -1 dB	Polarization	circular
VSWR typical	2	Coefficient of ellipticity typical	2 dB

**Radiation pattern**



# REFLECTORS ANTENNAS AND FEED SYSTEMS

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
ARC4-0,9	Cassegrain receiving reflector antenna with collapsible reflector.	10 - 60 GHz	81
FS1.XX FS2.XX	Feed systems for ARC4-0,9.	10 - 60 GHz	82
AR01-0,3	Dual polarization offset antenna.	18 - 40 GHz	83
ARC5-0,4	Cassegrain reflector antenna.	26,5 - 110 GHz	84
FS3.XX FS4.XX	Irradiation systems for ARC5-0,4.	33 - 110 GHz 38,5 - 110 GHz	85



# CASSEGRAIN RECEIVING REFLECTOR ANTENNA WITH COLLAPSIBLE REFLECTOR ARC4-0,9

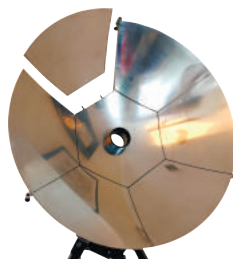
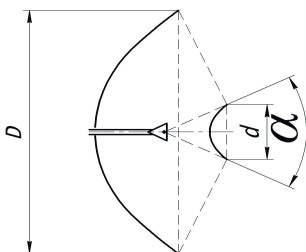
10 - 60 GHz



For receiving signals of radio relay and satellite communication lines.

Depending on the installed irradiation system provides receiving of signals with different types of polarization: linear, double linear, circular left and right rotation.

- ✓ Rapid change in frequency range is achieved by installing replaceable irradiation systems;
- ✓ Replacing the irradiator system requires no additional configuration of the antenna's system reflector;
- ✓ Small dimensions in the transport position;
- ✓ Collapsible design of the reflector allows to install the antenna system in hard to reach places and significantly facilitate its transportation.



Antenna system in the Assembly process.

## Specifications

Directivity (X-range)	not worse 33 dB	Reflector's diameter	0,9 m
Directivity (Ku-range)	not worse 38 dB	Subreflector's diameter	92 mm
Directivity (K-range)	not worse 42 dB	Angle $\alpha$	55°
Directivity (Ka-range)	not worse 45 dB	Mass	15,7 kg*
Directivity (U-range)	not worse 49 dB	Time to deploy the product from the transport state to the working state	40 minutes
		Time to change the irradiation system	2 minutes
		Number of reflector sections	6

Specifications of feed systems Tab.1

Type of feed system	Number of outputs	Width of radiation patterns by level	VSWR	Interchannel isolation	Polarization type of output
FS1.xx - L	1 x WR	55°	≤ 1,3	-	linear
FS2.xx - L			≤ 2	-	
FS1.xx - DL	2 x WR		≤ 1,3	27 dB	double linear
FS2.xx - DL			≤ 2	25 dB	
FS1.xx - DC	2 x WR		≤ 1,3	27 dB	circular left and right rotation
FS2.xx - DC			≤ 2	25 dB	

Nomenclature of feed systems for ARC4-0,9 Tab.2

Standard frequency range

FS1.xx series	Frequency range	Standard waveguide outputs
FS1.01-xx	10,0 - 12,4 GHz	WR 75
FS1.02-xx	12,4 - 15,9 GHz	WR 62
FS1.03-xx	15,9 - 18,0 GHz	WR 62
FS1.04-xx	18,0 - 20,5 GHz	WR 42
FS1.05-xx	20,0 - 24,5 GHz	WR 42
FS1.06-xx	24,0 - 26,5 GHz	WR 42
FS1.07-xx	26,5 - 33,0 GHz	WR 28
FS1.08-xx	33,0 - 38,5 GHz	WR 28
FS1.09-xx	38,5 - 40,0 GHz	WR 28
FS1.10-xx	40,0 - 43,0 GHz	WR 19
FS1.11-xx	43,0 - 50,0 GHz	WR 19
FS1.12-xx	50,0 - 60,0 GHz	WR 19

Alternative frequency range

FS2.xx series	Frequency range	Standard waveguide outputs
FS2.01	10,0 - 13,0 GHz	WR 75
FS2.11	37,0 - 40,0 GHz	WR 28

Information for ordering feed systems for ARC4-0,9

FSx.xx - xx

Basic product number according to the Tab. 2

Type of polarization  
- L  
- DL  
- DC

## DUAL POLARIZATION OFFSET ANTENNA AR01-0,3

**18 - 40 GHz**



For radio monitoring service tasks and for experimental researches.

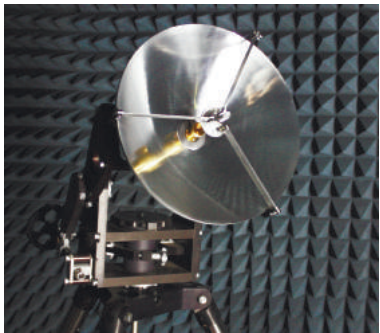
- ✓ High gain at small dimensions;
- ✓ As the irradiating system used horn feeder AF6.27 (p.60);
- ✓ Provides simultaneous signal receiving/transmitting with vertical/horizontal polarization via two channels.



### Specifications

Frequency range	18 - 40 GHz
Gain	≥ 30 dB
Radiation patterns width measured by 3 dB level	from 3,8° to 1,7°

Dimensions	417 x 340 x 438 mm
Polarization isolation	≥ 18 dB

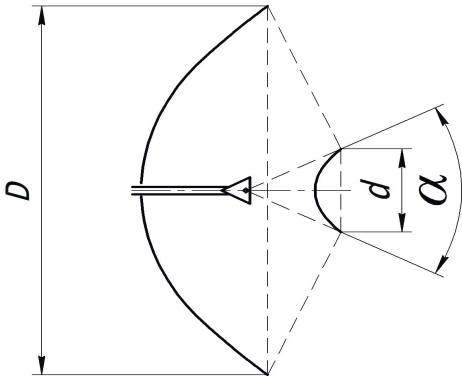


Mirror Antenna system



Recommended for receiving broadcasting radio signals of various communication lines, radio monitoring and for experimental researches.

- ✓ Provides receiving and broadcasting of signals in frequency range from 26,5 to 110 GHz;
- ✓ Rapid change in the frequency range is achieved by installing replaceable irradiation systems;
- ✓ When replacing the irradiating system, it is not necessary to make additional adjustments to the counter-reflector of the antenna system;
- ✓ High gain in the operating frequency range.



Scheme of cassegrain  
reflector antenna ARC5-0,4

Specifications	
Reflector's diameter	0,4 m
Subreflector's diameter	62 mm
Angle $\alpha$	45°
Gain	from 40 to 47 dB
Dimensions	1041 x 1500 mm
Mass	2,6 kg
Time to change the irradiation system	2 minutes

\* Mass is shown without mass of irradiation system and rotator



2 types of replaceable irradiation systems are produced:

FS3.xx – irradiation systems with typical cross-section waveguide output;

FS4.xx - irradiation systems with WR standard output.

Specifications of irradiation systems	FS3.xx	FS4.xx
Width of radiation patterns by level 0,1	45°	
VSWR	1,3	2
Crosspolarization	27 dB	

### Nomenclature of irradiation systems for ARC5-0,4

FS3.xx series	Frequency range	Circular waveguide diameter
FS3.01	33,0 - 38,5 GHz	0,250/6,35
FS3.02	38,5 - 43,0 GHz	0,219/5,56
FS3.03	43,0 - 50,0 GHz	0,188/4,78
FS3.04	40,0 - 43,0 GHz	0,210//5,33
FS3.05	43,0 - 50,0 GHz	0,188/4,78
FS3.06	50,0 - 60,0 GHz	0,165/4,19
FS3.07	50,0 - 58,0 GHz	0,165/4,19
FS3.08	58,0 - 68,0 GHz	0,141/3,58
FS3.09	68,0 - 75,0 GHz	0,125/3,18
FS3.10	60,0 - 66,0 GHz	0,136/3,45
FS3.11	66,0 - 82,0 GHz	0,125/3,18
FS3.12	82,0 - 90,0 GHz	0,94/2,39
FS3.13	75,0 - 88,0 GHz	0,112/2,84
FS3.14	88,0 - 110,0 GHz	0,094/2,39

FS4.xx series	Frequency range	Standard waveguide outputs
FS4.01	38,5 - 43,0 GHz	WR 22
FS4.02	43,0 - 50,0 GHz	WR 19
FS4.03	50,0 - 60,0 GHz	WR 19
FS4.04	58,0 - 68,0 GHz	WR 15
FS4.05	66,0 - 88,0 GHz	WR 12
FS4.06	88,0 - 110,0 GHz	WR 10

Information for ordering irradiation systems

**FSx.xx**

Basic product number  
according to the table

# ANTENNA ACCESSORIES

<i>Product</i>	<i>Description</i>	<i>Frequency range</i>	<i>Page</i>
SDC1S	Low-noise receiving downconverters.	30 - 300 MHz	87
Rotator (manual)	Manual rotator for antenna reflector system.		88
Mounting devices	Mounting devices for antennas.		89
DAT-01	Dielectric antenna tripod.		90
RMT-1	Reinforced metal tripod.		91



## LOW-NOISE RECEIVING DOWNCONVERTERS SDC1S

**30 - 300 MHz**



Low-noise receiving  
downconverter  
SDC1S8196.

Low-noise receiving downconverters transfer the spectrum of microwave signals of satellite and radio relay communication lines to the range of input frequencies of the basic radar receiver or measuring device in radio monitoring systems in frequency range sections from 26 to 96GHz.

- ✓ Low level of local oscillator frequencies;
- ✓ High stability of the local oscillator frequency;
- ✓ Output connector: N-type.

Name of product Name of specification	SDC1S2640	SDC1S4052	SDC1S5266	SDC1S6681	SDC1S8196
Input frequency range	from 26 to 40 GHz	from 40 to 52 GHz	from 52 to 66 GHz	from 66 to 81 GHz	from 81 to 96 GHz
Gain	≤ 10 dB	≤ 15 dB	≤ 17 dB	≤ 17 dB	≤ 17 dB
Transfer factor	≥ 25 dB	≥ 25 dB	≥ 25 dB	≥ 20 dB	≥ 20 dB
Level of compression of the input signal by 1 dB at the input	≥ 10 dB/mV	≥ 5 dB/mV	≥ 5 dB/mV	≥ 5 dB/mV	≥ 10 dB/mV
Dynamic range by compression of the input signal by 1 dB at the input	≥ 60 dB	≥ 60 dB	≥ 60 dB	≥ 55 dB	≥ 55 dB
Suppression of the mirror and combined reception channels	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB	≥ 45 dB
Spectral power density of phase noise at 10 kHz tuning	≤ -96 dB/Hz	≤ -90 dB/Hz	≤ -90 dB/Hz	≤ -88 dB/Hz	≤ -88 dB/Hz
Nominal value of the intermediate frequency	from 3 to 18 GHz	from 3 to 18 GHz	from 3 to 18 GHz	from 3 to 18 GHz	from 3 to 18 GHz
VSWR inpit, output	2,5	2,5	2,5	2,5	2,5
Voltage	12 V	12 V	12 V	12 V	12 V
Operating temperature range	-40°C +50°C	-40°C +50°C	-40°C +50°C	-40°C +50°C	-40°C +50°C

## ROTATOR (MANUAL)

Manual rotator for Antenna reflector system.

The rotator can be used in normal conditions and in unheated indoors.

Control is carried out by rotating the manual drives.

It is possible to perform the load fastening unit according to the customer's technical order.



Rotator on the tripod.



Rotator (manual).

Specifications	
Mass	16 kg
Dimensions	485 x 396 x 410 mm
Limits of rotation:	
- by azimuth	within 270°
- by elevation angle	from -10° to +45°
Accuracy of the reference	± 0,1°
Maximum gear load	40 kg
Diameter of the mirror mounting	According to the customer's specifications
Height of the mirror mounting	

## MOUNTING DEVICES

Mounting devices AD-02M is designed to accommodate the measuring antennas of “SKARD-Electronics” on a standard tripod using the standard mount of antennas. It has a built-in antenna alignment device (cold aiming tube) and a polarization scale. As an option, instead of a cold aiming tube, it is possible to use a laser marker.



Universal mounting device AD-08L.



Universal mounting device AD-09L.



Mounting device AD-02M  
with antenna AS6.19.



Mounting device AD-08W.



Mounting device AD-02M  
with alignment device.

Mounting device AD-03 is designed for installation on a dielectric tripod with antennas:

- AS7.22;
- AS7.23M;
- AS7.24;
- AS2.21;
- AS3.09.

Body fixes in the DAT-01. Antenna installs into the port with a diameter of 23 mm and fixes with a screw.

Holder is made of dielectric materials



Mounting device AD-03.

# DIELECTRIC ANTENNA TRIPOD DAT-01

Dielectric antenna tripod is designed for placement of measuring antennas during accurate measurements of the electromagnetic field.

The tripod mounting unit is equipped with three coordinate scales in azimuth, elevation and polarization plane.



Tripod mounting unit.



Tripod folded.



Tripod with an attached antenna AS6.19.

Specifications	
Mass	4,8 kg
Min. high	1750 mm (2700)* (3500)*
Max. high	720 mm
Dimensions when folded	835*230*210 mm
Maximum permissible vertical load	6 kg
The limits of rotation:	
- by azimuth	0 – 360°, accuracy 1 °
- by elevation angle	-10 ° + 70 °, accuracy 1°
- by plane of polarization	±90°, accuracy 2°

\*producing with different maximum working height is possible.

## REINFORCED METAL TRIPOD RMT-1

RMT-1 tripod designed for installation of large aperture antennas during electromagnetic field measurements.

It is possible to perform the design of the fastening unit according to the customer's specifications.



**On photo:**  
tripod in expanded form.



**On photo:**  
tripod in folded form.

Specifications	
Mass	22,5 kg
Min. high	900 mm
Max. high	1400 mm
Dimensions when folded	425 x 410 x 1100 mm
Occupied area at a height of 900 mm	1,2 m <sup>2</sup>
Occupied area at a height of 1400 mm	2,7 m <sup>2</sup>
Maximum permissible vertical load	100 kg
Diameter of the mirror mounting	According to the customer's specifications
Height of the mirror mounting	

# About company

The company was founded in 2000. Through to our own material and technical base, innovative ideas and potential of the company's employees, we have managed to reach the level of import-substituting products that meet the high requirements for quality, appearance and functionality of the equipment.

The main types of manufactured products:

- multichannel frequency transponders in the range from 9 kHz to 60 GHz;
- radio receivers in the frequency range from 9 kHz to 110 GHz;
- elements of antenna-feeder path and antenna-feeder systems in the frequency range from 9 kHz to 110 GHz;
- measuring antennas in the frequency range from 1 kHz to 110 GHz;
- complexes of radio monitoring and electronic signal processing in the frequency range from 9 kHz to 60 GHz.

Professional approach of employees to work and clear knowledge of the business corresponds to the level of our tasks:

- compliance with the optimal terms of production and delivery;
- provision of warranty and post-warranty service of our products;
- individual approach to solving problems of our Customers;
- developed dealer network in Russia.

Using the latest tools for modeling and testing of equipment, training qualification programs and thematic demonstration seminars for employees, participation in exhibitions and conferences – has increased productivity, develop and implement innovative developments in the production cycle.



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