

# SHF Antennas

## Crossed Log-Periodic Antenna R&S® HL 024S7

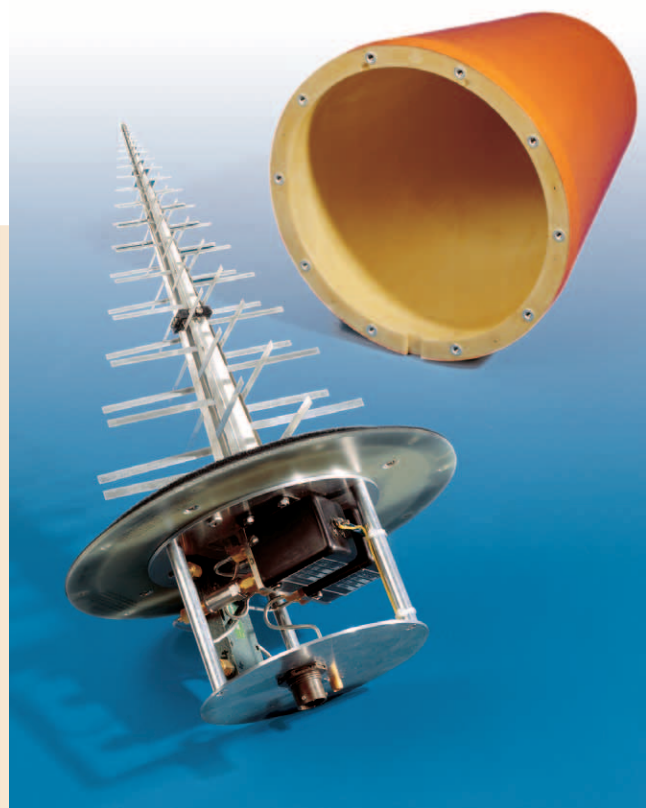


1 GHz to 18 GHz

Log-periodic directional antenna  
consisting of R&S® HL024A1 and a  
broadband preamplifier for horizontal or  
vertical polarization (selectable)

### Features

- ◆ Wide frequency range
- ◆ Selectable broadband preamplifier
- ◆ Horizontal or vertical polarization switch-selectable
- ◆ No reduction in S/N due to the use of a low-noise amplifier at the antenna output
- ◆ Can be used as a feed for the SHF Directional Antenna Systems R&S® AC090 to R&S® AC300



### Brief description

The directional R&S® HL024S7 consists of the Crossed Log-Periodic Antenna R&S® HL024A1 and a broadband preamplifier. It is suitable for the reception of linearly polarized waves.

Horizontal or vertical polarization can be switch-selected.

The preamplifier can be optionally switched on. It prevents a significant reduction in S/N due to loss in RF cables connecting, for instance, the antenna to a receiver.

The antenna can also be used as a feed for the SHF Directional Antenna Systems R&S® AC090 to R&S® AC300.



## Specifications

Frequency range	1 GHz to 18 GHz	Power supply	+15 V DC (max. 0.3 A)
Polarization	horizontal or vertical (selectable)	Connector	SMA female
Input impedance	50 $\Omega$	Control connector	10-contact, round, male
VSWR	<2.5	MTBF	>100 000 h
Gain (without polarization switch/preamplifier)	>6 dBi	Operating temperature range	-30 °C to +55 °C
Noise figure	$\leq 3$ dB	Dimensions (diameter $\times$ height)	
Gain (active network – can be switched on)	26 dB $\pm 2$ dB	With radome	approx. 210 mm $\times$ 390 mm
1 dB compression point	approx. +8 dBm	Weight	approx. 1 kg

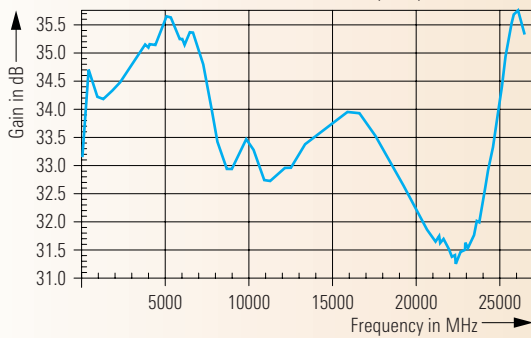
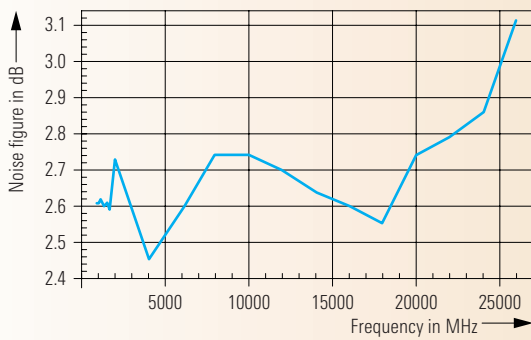
## Ordering information

### Crossed

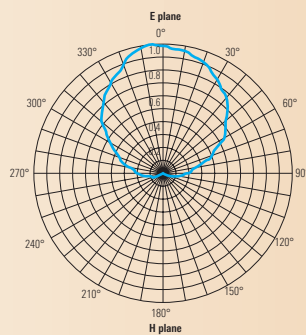
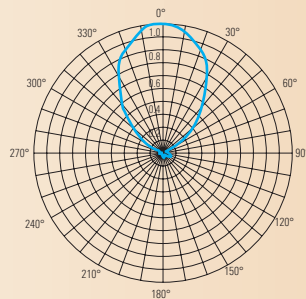
**Log-Periodic Antenna** R&S®HL024S7 4042.8505.02

### Recommended extras

Control Unit	R&S®GB016	4056.7006.02
Control Cable, 10 m	R&S®GB016Z1	4056.7270.02
Microwave Cable, 5 m	R&S®AC008W2	0751.6931.04
Microwave Cable, 10 m	R&S®AC008W2	0751.6931.05



*Typical noise figure and gain of broadband preamplifier*



*Typical radiation patterns in the E and H planes*