

R&S®HL046 EMS Antenna



80 MHz to 1.3 GHz

Log-periodic antenna for EMS measurements

The R&S®HL046 for EMS measurements consists of two log-periodic antennas arranged in a V-shape and connected in parallel. Due to this construction, high selectivity is obtained in the H plane and the radiation patterns are practically rotation-symmetrical.

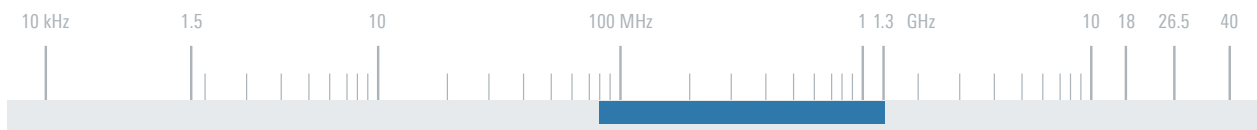
Its small size and wide frequency range make the antenna suitable for use in test chambers.

The antenna is mounted on a trolley whose height can be continuously adjusted between approx. 1 m and 1.75 m above ground. Polarization is manually set. Pneumatic actuators can optionally be provided.

Key facts

- High antenna gain, i.e. low amplifier power required
- Only one antenna required to cover a wide frequency range
- Uniform object irradiation due to optimized radiation patterns
- Reduced influence of test chamber
- Wall mounting possible
- Small size





Specifications

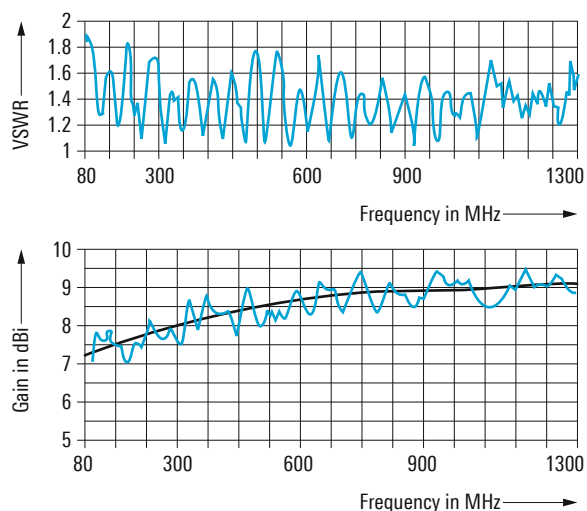
Frequency range	80 MHz to 1.3 GHz
Polarization	linear
Input impedance	50 Ω
VSWR	< 2
Max. input power ($T_A = +40^\circ\text{C}$)	
80 MHz	1000 W + 100% AM
500 MHz	500 W + 100% AM
1 GHz	300 W + 100% AM
1.3 GHz	250 W + 100% AM
Gain	> 7 dBi (typ.)
Front-to-back ratio	> 20 dB (typ.)
Polarization decoupling	20 dB (typ.)
Connector	N female

Class of application	laboratory
MTBF	> 100 000 h
Operating temperature range	-10°C to $+50^\circ\text{C}$
Dimensions (W \times H \times L)	
Without trolley	approx. 0.85 m \times 1.57 m \times 1.75 m (33.5 in \times 61.8 in \times 68.9 in)
With trolley	approx. 0.86 m \times 1.90 m (variable up to 2.60 m) \times 1.85 m (33.9 in \times 74.8 in (variable up to 102.4 in) \times 72.8 in)
Weight	
Without trolley	approx. 12.5 kg (27.6 lb)
With trolley	approx. 22.5 kg (49.6 lb)

Ordering information

Ordering information	Type	Order No.
EMS Antenna (with trolley)	R&S®HL046	4040.8708.02
Recommended extras		
Pneumatic Actuators for polarization setting	R&S®HL046-P	4053.1694.02

Typical VSWR and gain



Typical radiation patterns

