R&S®HL046 EMS Antenna

80 MHz to 1.3 GHz

Log-periodic antenna for EMS measurements

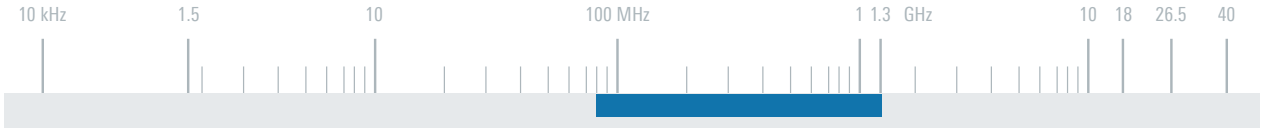
The R&S®HL046 for EMS measurements consists of two log-periodic antennas arranged in a V-shape and connected in parallel. Due to this construction, high selectivity is obtained in the H plane and the radiation patterns are practically rotation-symmetrical.

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

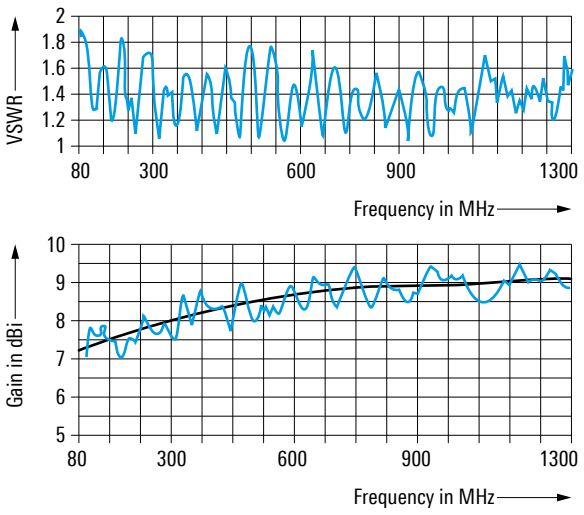
Frequency range	80 MHz to 1.3 GHz
Polarization	linear
Input impedance	50 Ω
VSWR	< 2
Max. input power (T_A = +40 °C)	
80 MHz	1000 W + 100 % AM
500 MHz	500 W + 100 % AM
1 GHz	300 W + 100 % AM
1.3 GHz	250 W + 100 % AM
Gain	typ. > 7 dBi
Front-to-back ratio	typ. > 20 dB
Polarization decoupling	typ. 20 dB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

Class of application	laboratory
MTBF	> 100 000 h
Operating temperature range	–10 °C to +50 °C
Dimensions (W × H × L)	
Without trolley	approx. 0.85 m × 1.57 m × 1.75 m (33.5 in × 61.8 in × 68.9 in)
With trolley	approx. 0.86 m × 1.90 m (variable up to 2.60 m) × 1.85 m (33.9 in × 74.8 in (variable up to 102.4 in) × 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