

R&S®HE314A1 ACTIVE OMNIDIRECTIONAL ANTENNA

20 MHz to 500 MHz

Active omnidirectional reception of horizontally polarized waves



The R&S®HE314A1 is a turnstile antenna consisting of two active receiving dipoles connected via a 90° hybrid coupler.

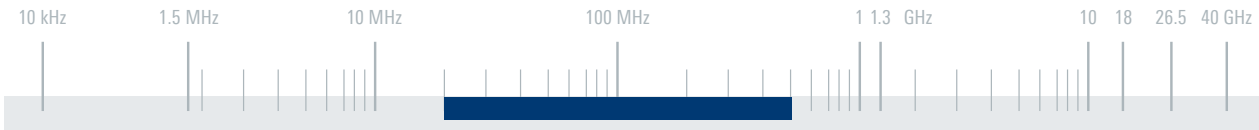
The antenna is used for the reception of horizontally polarized signals; the horizontal radiation pattern is optimized for omnidirectional reception.

The R&S®HE314A1 can be extended for omnidirectional reception of vertically polarized waves by using, for example, an R&S®HE309E active vertical dipole mounted at the top.

Key facts

- ▶ High sensitivity
- ▶ Wide frequency range
- ▶ Omnidirectional reception of horizontally polarized waves
- ▶ Small size
- ▶ Ideal for mobile or semi-mobile receiving systems

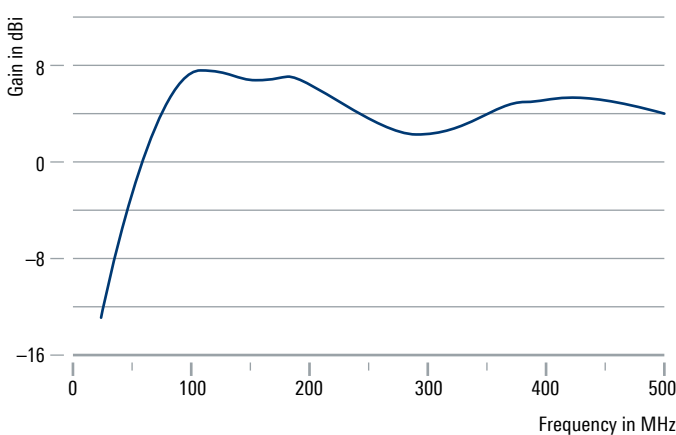




Specifications		
Frequency range		20 MHz to 500 MHz
Polarization		
	at horizon	linear horizontal
	at 90° elevation	right-hand circular
Input impedance		50 Ω
VSWR		< 2.5
Realized gain		-14 dB to +5 dB
Antenna factor		2 dB (1/m) to 20 dB (1/m) (see diagram)
Field strength sensitivity ($\Delta f = 1 \text{ Hz}$; $S/N: 0 \text{ dB}$)	20 MHz	-42 dB($\mu\text{V/m}$)
	500 MHz	-33 dB($\mu\text{V/m}$)
IP2		> 60 dBm
IP3		> 30 dBm
Power supply		18 V to 30 V DC (340 mA (typ.))
Connector		N female
MTBF		> 25 000 h
Operating temperature range		-40°C to +70°C
Maximum wind speed	without ice deposit	180 km/h
Dimensions	W × H × L	approx. 1 m × 0.33 m × 1 m (39 in × 13 in × 39 in)
Weight		approx. 8 kg (18 lb)

Ordering information	Type	Order No.
Active omnidirectional antenna	R&S®HE314A1	4027.6505.02
Recommended extras		
Bias unit	R&S®IN600	4094.3004.xx
Active vertical dipole	R&S®HE309E	4098.0000.02

Typical realized gain



Typical antenna factor

