

VHF/UHF Antennas

Active Receiving Dipole

R&S® HE 302



20 MHz to 500 MHz

Optimized for very small dimensions

Features

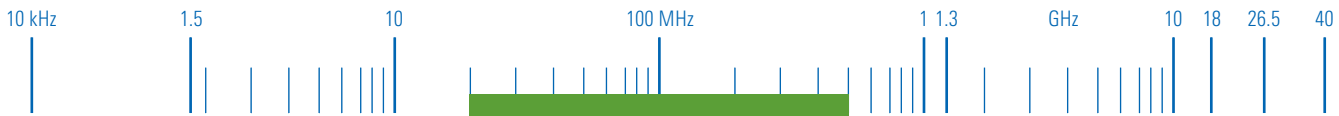
- ◆ High sensitivity despite small dimensions
- ◆ Wide frequency range
- ◆ High immunity to nonlinear distortion
- ◆ High immunity to lightning strokes in the vicinity
- ◆ Low weight
- ◆ Extremely small dimensions
- ◆ Shock- and vibration-proof

Brief description

The Active Receiving Dipole R&S® HE302 features a very wide frequency range despite its small dimensions. Its high input sensitivity is the result of optimized matching of the passive antenna structure to the active circuitry.

These characteristics allow several passive antennas to be replaced by an Active Receiving Dipole R&S® HE302.

Similar to a passive antenna with high-grade preamplifiers, the active antenna is highly insensitive to nonlinear distortion.



Specifications

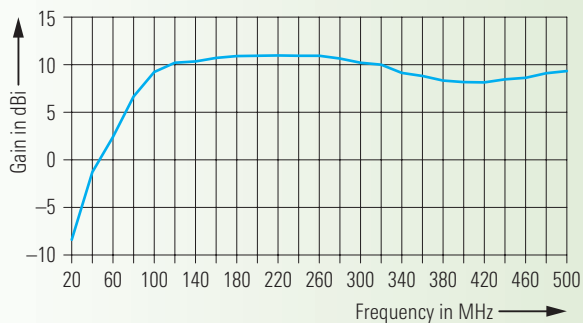
Frequency range	20 MHz to 500 MHz	IP2	>60 dBm
Polarization	linear	IP3	>30 dBm
Input impedance	50 Ω	Power supply	
VSWR	<2.5	Up to +40 °C	18 V to 30 V DC, approx. 170 mA
Electronic gain	-11 dB to +8 dB	Up to +75 °C	18 V to 25 V DC, approx. 170 mA
Practical gain	-9 dBi to +10 dBi	Connector	N female
Directivity	2 dB (average)	MTBF	>50 000 h
Antenna factor	0 dB to 14 dB	Operating	
Noise figure		temperature range	-40 °C to +75 °C
20 MHz	28 dB	Max. wind speed	180 km/h (without ice deposit)
500 MHz	9 dB	Dimensions (L x H)	approx. 1 m x 240 mm
Field strength sensitivity ($\Delta f = 1$ kHz)		Weight	approx. 2.5 kg
20 MHz	-15 dB(μ V/m)		
500 MHz	-6 dB(μ V/m)		

Ordering information

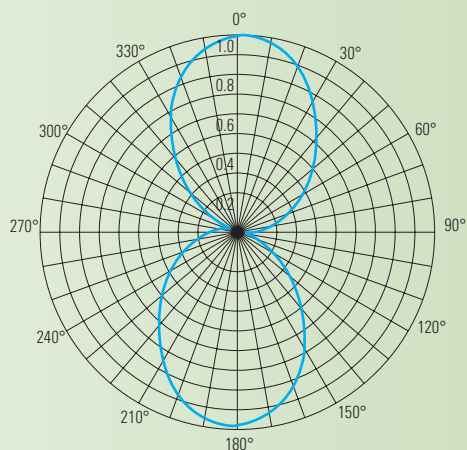
Active Receiving Dipole R&S®HE302 0644.1114.02

Recommended extras

Power Supply Unit	R&S®IN 115	4004.1707.02
Mast Adapter (for special polarization alignment only)	R&S®HE 202Z1	0649.7510.02
RF Cable	R&S®HE 202Z2	0649.7785.02



Typical practical gain



Typical radiation pattern in the E plane at 200 MHz