

GSM  
GSM

UMTS  
UMTS

20 MHz to 3 GHz



## Active Receiving Antenna R&S HE500

20 MHz to 3000 MHz

Due to the increase in telecommunication services such as GSM and UMTS, an ever wider frequency spectrum has to be monitored. Compact, mobile and flexible solutions are therefore required that enable the monitoring authorities to perform their tasks fast, reliably and at reasonable cost.

The Active Receiving Antenna R&S HE500 has been developed to meet all these requirements. With a frequency range from 20 MHz to 3000 MHz, the R&S HE500 is extremely broadband. The compact R&S HE500 is designed to withstand high wind speeds and loads and is therefore ideal for use on vehicles.

The R&S HE500 consists of two active dipoles arranged one on top of the other, which are combined via a diplexer to form a common output. The antenna is powered from a bias unit via coaxial cable.



**ROHDE & SCHWARZ**

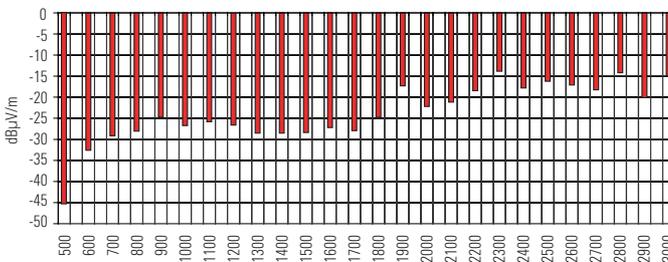
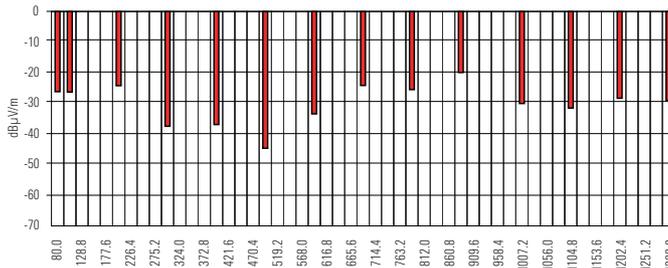
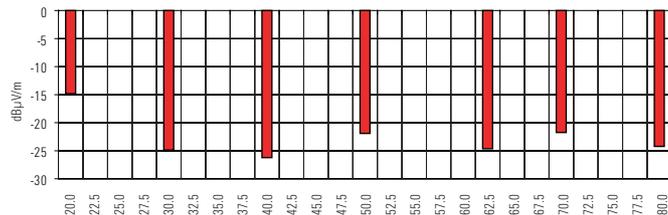
## Specifications

Frequency range	20 MHz to 3000 MHz
Polarization	vertical
Horizontal pattern	omnidirectional
Field strength sensitivity	see diagrams
Destructive field strength	
up to 10 MHz	>50 V/m typ.
10 MHz to 20 MHz	>20 V/m typ.
20 MHz to 3000 MHz	>10 V/m typ.
Linearity of antenna circuitry	IP2 ≥50 dBm to ≥30 dBm, typ. IP3 ≥25 dBm typ.
Power supply	via RF cable 18 V DC to 32 V DC, 180 mA max.
Impedance	50 Ω
VSWR	<3.5 typ.
RF connector	N female
Dimensions (L x W x H)	171 mm x 65 mm x 366 mm
Fastening points	see figure
Weight	approx. 1.2 kg
Max. wind speed	
without ice deposit	narrow side: 600 km/h broad side: 250 km/h
with 30 mm ice deposit	narrow side: 200 km/h broad side: 200 km/h

Permissible temperature range	-40 °C to +65 °C
Storage temperature range	-40 °C to +85 °C
Humidity	95% at +25 °C/+55 °C DIN EN 600 68-2-30
Vibration test	random 10 Hz to 300 Hz: 0.01 g <sup>2</sup> /Hz 300 Hz to 500 Hz: 0.003 g <sup>2</sup> /Hz
Shock test	max. 40 g, spectrum 45 Hz to 2000 Hz
Waterproofness	IP55 to DIN 40050 50 000 hours MIL: GROUND FIXED +25 °C
MTBF	

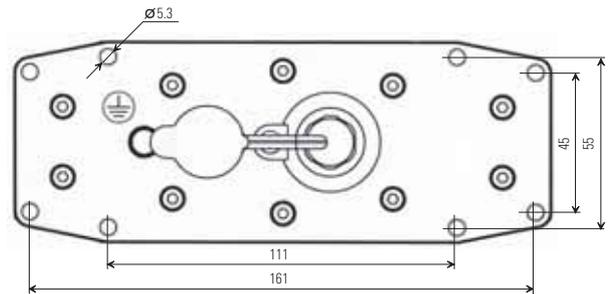
## Ordering information

Active Receiving Antenna	R&S HE500	4059.2005.02
Bias Unit	R&S IN500	4062.0880.02



*Left: Field strength sensitivity (S/N=1) referred to limit field strength (1 Hz bandwidth, frequency in MHz)*

*Below: Fastening points*



Certified Environmental System  
**ISO 14001**  
REG. NO 1954

Certified Quality System  
**ISO 9001**  
DQS REG. NO 1954



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