

**Broadband monoaxial measurement antenna**
**INTRODUCTION**

AP6000 is a broadband monoaxial antenna for accurate field strength measurement in the range 1,6 ÷ 6,0 GHz.

This device performs accurate RF radiation measurements and people exposure evaluation near to broadcast stations or next to mobile telephone base stations (such as UMTS, WiMax, Hiperlan, WiFi etc.).

This small size antenna enables frequency selective E-field strength measurement in a wide frequency range. Total field is obtained combining the vector components (Ex, Ey, Ez). This can be done using the software package (art. SW3000) .

The omnidirectional receiving diagram of this antenna guarantees isotropic behavior that is independent of results from the x, y, z coordinate directions.

Each antenna is delivered with standard individual free-space calibration certificate (K factor and SWR).


**SPECIFICATIONS**

**Frequency range:** from 1,6 GHz to 6,0 GHz.

**Transducer type:** linear passive dipole antenna.

**Polarization:** linear, monoaxial, alline with symmetry mechanical axis.

**Antenna factors:** individual calibration data.

Frequency (MHz)	Typical Antenna factor * (dB $\mu$ V/m)	Typical Return Loss * (dB)
1 600	35	10
1 800	35	15
2 000	35	18
2 500	38	10
3 000	39	9
3 500	41	7
4 000	42	10
4 500	43	8
5 000	44	14
5 500	44	23
6 000	45	21

\* at antenna RF output connector

**Sensitivity:** > 0.5 mV/m (depend of RBW and noise quality of spectrum analyzer)

**Max applicable field strength:** > 300 V/m

**Electric field vector reconstruction Error (Total Isotropy)**

Maximum error for filed incidence

direction  $\theta = 0^\circ \div 180^\circ$  and  $\varphi = 0^\circ \div 360^\circ$ : < 2,2 dB

RMS error for field incidence

direction  $\theta = 0^\circ \div 180^\circ$  and  $\varphi = 0^\circ \div 360^\circ$ : < 1,0 dB

**H-plane Isotropy error**

Maximum error for  $\varphi=0^\circ \div 360^\circ$  incidence direction: < 0,6 dB

RMS error for  $\varphi=0^\circ \div 360^\circ$  incidence direction: < 0,3 dB

**Dimensions:** - total length: 340 mm  
 - antenna radome:  $\varnothing$  80 mm  
 - antenna handle:  $\varnothing$  32 mm

**Weight:** 1,5 kg

**RF connector:** Nf, 50 Ohm

**AMBIENT CONDITIONS**

**Protection class:** IP 42.

**Temperature range:**  $-30^\circ\text{C}$  to  $+55^\circ\text{C}$ .

**Humidity:** max 95% at  $40^\circ\text{C}$

**ENCLOSED ACCESSORIES**

- Calibration certificate with antenna factor and return loss.
- 10 m coaxial cable, ferritized with calibration certificate of attenuation and return loss;



- tri-axis mounting hardware 35,3 deg for wooden tripod (1/4" screw)


**OPTIONS**

- Wooden Tripod



- Carry case
- SW3000, measurement software for narrow band of electromagnetic fields driving Agilent® ESA and WillTek® 910x spectrum analyzers.