

## Detection of low-level emissions in TEMPEST\* measurements

### Active Antenna System AM524

- High sensitivity
- Frequency range 100 Hz to 1000 MHz
- High measurement accuracy due to individual calibration
- Wide level range
- Compact design for use in small cabins
- Integration into automatic test systems

Low-level emissions from EDP peripherals like monitors, printers and data lines can be targeted for eavesdropping and so compromise security. Measures to counteract eavesdropping are essential, but measuring techniques capable of handling spurious emissions just above the noise floor are required to implement them. Low-noise Active Antenna System AM 524 has been designed for tackling applications of this kind.

AM 524 meets the requirements made on an antenna in a high-sensitivity system measuring compromising emissions. AM 524 provides highly advanced technology to all bodies engaged in the detection of extremely low-level signals, helping them to fulfill their task of ensuring security of the equipment tested.

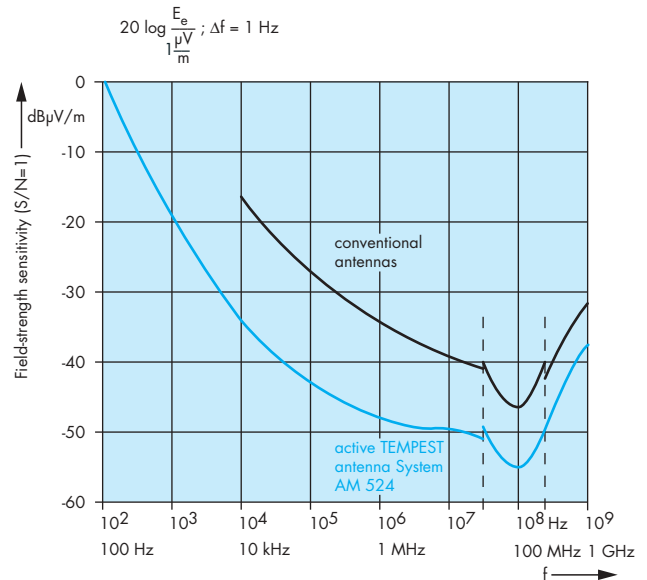
\*) TEMPEST: generic term for anything related to the emanation of sensitive information



**ROHDE & SCHWARZ**

## Specifications

|                                                        |                                                                                                                   |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Frequency range                                        | 100 Hz to 1000 MHz with three antennas                                                                            |
| Nominal impedance                                      | 50 Ω                                                                                                              |
| Sensitivity<br>(Δf = 1 Hz)                             | 0 dBμV/m (100 Hz)<br>-43 dBμV/m (100 kHz)<br>-51 dBμV/m (30 MHz)<br>-54 dBμV/m (100 MHz)<br>-37 dBμV/m (1000 MHz) |
| Conversion factor (without attenuator/extra amplifier) | approx. 0 dB (100 Hz to 30 MHz)<br>-12 dB (100 MHz)<br>20 dB (1000 MHz)                                           |
| Power supply                                           | 24-V battery or 110/220-Vac line                                                                                  |
| RF connectors                                          | N female                                                                                                          |
| Remote control                                         | via fibre-optic cable                                                                                             |
| Operating and nominal temperature ranges               |                                                                                                                   |
| Antennas                                               | -10 to +55 °C                                                                                                     |
| Junction units                                         | 0 to +50 °C                                                                                                       |
| Storage temperature range                              | -25 to +70 °C                                                                                                     |
| Dimensions, weight                                     |                                                                                                                   |
| Active Rod Antenna HE 525                              | 1500 mm x 600 mm, 5 kg                                                                                            |
| Active Dipole Antenna HE 526                           | 1000 mm x 319 mm, 1.7 kg                                                                                          |
| Active Dipole Antenna HE 527                           | 500 mm x 250 mm, 1.6 kg                                                                                           |
| Cabinet for junction units<br>(W x H x D)              | 235 mm x 150 mm x 400 mm                                                                                          |
| Transit case                                           | 660 mm x 545 mm x 245 mm                                                                                          |

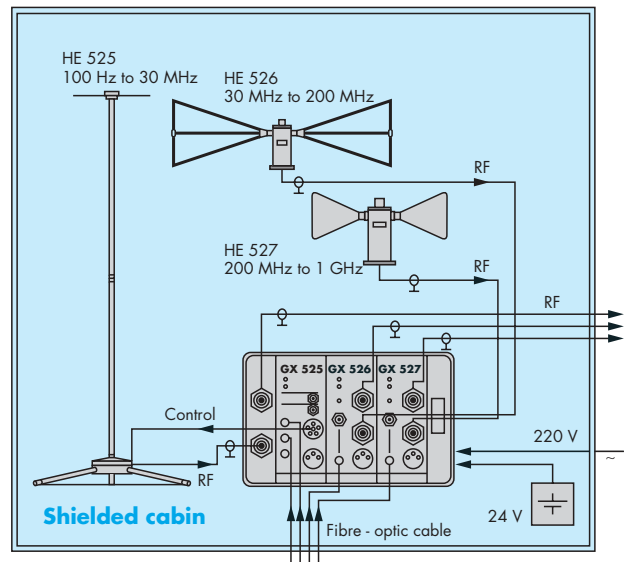


Field-strength sensitivity of Active Antenna System AM 524 compared to values attained with conventional antennas

## Ordering information

### Order designation

|                            |                              |              |
|----------------------------|------------------------------|--------------|
| consisting of              | Active Antenna System AM 524 | 4015.7001.02 |
| Active Rod Antenna         | HE 525                       | 4015.7101.02 |
| Active Dipole Antenna      | HE 526                       | 4015.7501.02 |
| Active Dipole Antenna      | HE 527                       | 4015.8008.02 |
| Junction Unit for HE 525   | GX 525                       | 4015.9256.02 |
| Junction Unit for HE 526   | GX 526                       | 4015.9504.02 |
| Junction Unit for HE 527   | GX 527                       | 4015.9756.02 |
| Cabinet for junction units | KK 524                       | 4015.9004.02 |
| Transit case               | ZR 524K                      | 4015.8508.02 |



Components of Active Antenna System AM 524 for measuring emissions in shielded cabins

