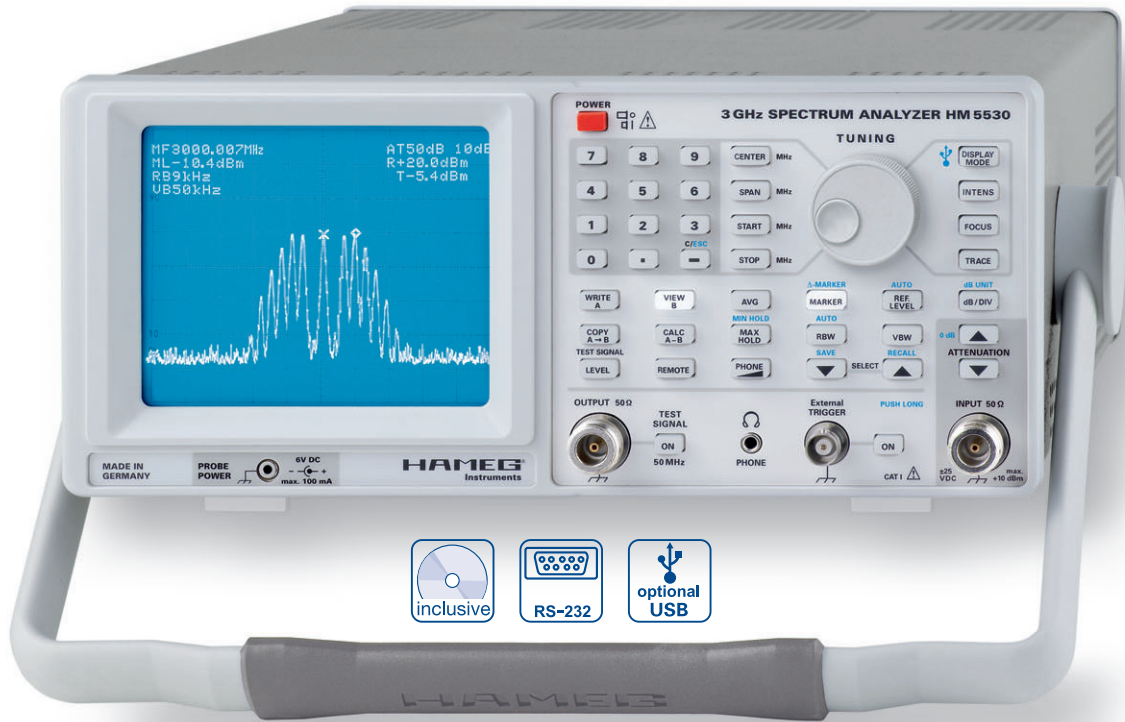


3 GHz Spectrum Analyzer HM5530

HM5530



inclusive



RS-232

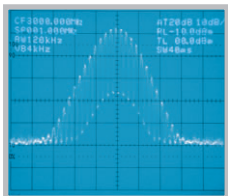


optional
USB

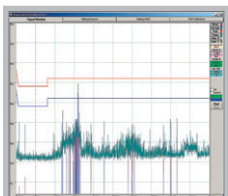
Dual RS-232/USB Interface



Amplitude modulated
3 GHz signal



Measurement of
line-conducted interference



Frequency range from 100 kHz to 3 GHz

Amplitude measurement range from -110 dBm to +20 dBm

Phase Synchronous, Direct Digital frequency Synthesis (DDS)

Resolution bandwidths (RBW): 9 kHz, 120 kHz and 1 MHz

YIG oscillator

Pre-compliance EMI measurements

Software for extended measurement functions for
EMI measurements included

RS-232 Interface

optional: USB/RS-232 for documentation and control

3 GHz Spectrum Analyzer HM5530

Valid at 23 °C after a 30 minute warm-up period

Frequency characteristics

| | |
|--------------------------------|--|
| Frequency range: | 100 kHz to 3 GHz |
| Frequency generation: | TXCO with DDS (Digital Frequency Synthesis) |
| Stability: | ± 1 ppm |
| Aging: | ± 1 ppm/year |
| Frequency resolution: | 1 kHz (6½-digit readout) |
| Center frequency range: | 0 to 3 GHz |
| Tolerance of center frequency: | ± 1 kHz |
| Span setting range: | 0 (zero span) and 1 to 3000 MHz |

Amplitude characteristics

| | |
|--|---|
| Display range: | -110 dBm to +20 dBm |
| Scaling, units: | 10 or 5 dB/div, dBm, dBmV, dBµV selectable |
| Dynamic range: | 80 dB (10 dB/div), 40 dB (5 dB/div) |
| Amplitude frequency response (ATT 10 dB, zero span, 1 MHz-RBW signal level -20 dBm): | ± 3 dB |
| Display (CRT): | 8 cm x 10 cm |
| Display characteristic: | logarithmic |
| Display units: | dB (dBm, dBmV, dBµV) |
| Input attenuator: | 0 to 50 dB in 10 dB increments |
| Tolerance of input attenuator: | ± 2 dB relative to 10 dB position |
| Maximum continuous input level: | |
| Attenuation 10 to 50 dB: | +20 dBm (0.1 W) |
| Attenuation 0 dB: | +10 dBm |
| Maximum input dc voltage: | ± 25 V |
| Reference level: | |
| Adjustment range: | -110 dBm to +20 dBm |
| Tolerance (1500 MHz, ATT 10 dB, Zero Span, RBW 1 MHz): | ± 1 dB |
| Min. average noise level (RBW 9 kHz): | |
| 150 kHz – 1.5 MHz: | -90 dBm |
| 1.5 MHz – 2.6 GHz: | -100 dBm |
| 2.6 GHz – 3.0 GHz: | -90 dBm |

3rd order intermodulation:

2 signals of -33 dBm each,
frequency difference > 3 MHz: > 75 dBc

2nd order harmonic distortions (2nd harmonic at a signal level of -30 dBm,
ATT 0 dB, frequency difference > 3 MHz): > 75 dBc

2nd order harmonic distortions (2nd harmonic at a signal level of -30 dBm,
ATT 0 dB, frequency difference > 3 MHz): ± 1 dB

Digitization: ± 1 Digit (0.4 dB) at 10 dB/div
scaling (average, zero span)

Marker/Deltamarker

| | |
|-----------------------|---|
| Frequency resolution: | span/2000, max. 1 kHz, 6½-digit |
| Frequency accuracy: | ± [1 kHz + tolerance of center frequency + 0.02% x span] |
| Amplitude resolution: | 0,4 dB, 3½-digit |

Bandwidths

| | |
|---|------------------------------|
| Resolution bandwidths (RBW) at -6 dB: | 1 MHz, 120 kHz, 9 kHz |
| Videobandwidth (VBW): | 50 kHz, 4 kHz |
| with automatic selection of sweep time: | 40, 80, 160, 320 and 1000 ms |

Inputs/Outputs

| | |
|------------------------------------|--|
| Measuring input: | N connector |
| Input impedance: | 50 Ω |
| VSWR (ATT 10 dB): | typ. 1,5 : 1 |
| Testsignal output: | N connector |
| Output impedance: | 50 Ω |
| Frequency: | 50 MHz ± 1 kHz |
| Level: | -10 to 0 dBm (in 0.2 dB-increments) |
| Accuracy of level: | ± 3 dB @ 0 dBm |
| Supply voltage for field probes | 6 V _{DC} , max. 100 mA 2.5 mm DIN jack |
| Audio output (PHONE): | 3.5 mm DIN jack |
| RS-232 interface: | 9-pin. sub-D |
| External trigger input: | BNC connector |

Digital signal:

| | |
|-------------|------------------|
| Low level: | 0 to +0,8 V |
| High level: | +2.5 V to +5.0 V |

Functions

| | |
|-----------------------|---|
| Keyboard input: | Center frequency, span, start frequency, stop frequency, marker, delta marker, reference level, test signal level |
| Rotary encoder input: | Center frequency, span, start frequency, stop frequency, marker, delta marker, reference level, test signal level intensity, focus, trace rotation, volume |
| MAX HOLD: | Peak detection |
| AVG (average): | Averaging |
| Reference spectrum: | memory depth 2 k x 8 Bit |
| SAVE/RECALL: | Storage and recall of up to 10 instrument settings |
| AM demodulation: | for the PHONE output |
| REMOTE: | Display of remote/local control via RS-232 interface |
| Readout: | 8 parameter display fields, display of key board inputs |

Miscellaneous

| | |
|----------------------------|---|
| Display (CRT): | D 14-363GY, 8 cm x 10 cm internal graticule |
| Acceleration voltage: | approx. 2 kV |
| Trace rotation: | adjustable on front panel |
| Ambient temperature range: | +10 to +40 °C |
| Storage temperature: | -40 to +70 °C |
| Power supply: | 105 to 254 V _{AC} , 50 to 60 Hz, approx. 37 W CAT II |
| Safety class: | I (EN/IEC 61010-1) with protective earth |
| Dimensions (W x H x D): | 285 x 125 x 380 mm Adjustable handle, as a tilt-stand or for convenient carrying |
| Weight: | approx. 6.5 kg |

Accessories supplied: Line cord, manual, CD-ROM, HZ21 Adapter N male to BNC female

Optional accessories:

H0720 Dual-Interface USB/RS-232
HZ70 Opto-Interface (with optical fiber cable)
HZ520 Antenna
HZ540/550 Near Field Probe sets
HZ560 Transient Limiter
HZ575 75/50 -Q-converter

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