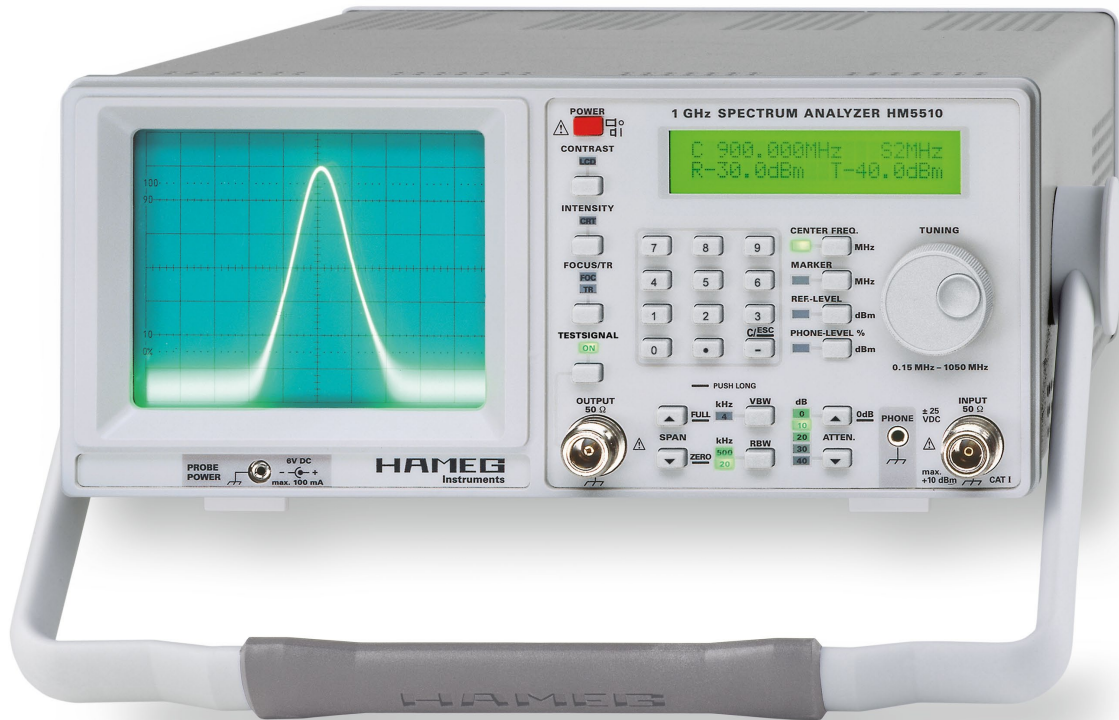
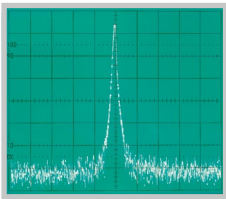


## 1 GHz Spectrum Analyzer HM5510

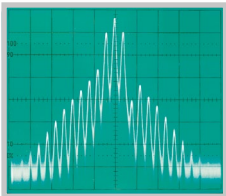


HM5510

Unmodulated RF Signal



Amplitude-modulated  
RF Signal



- Frequency Range 150kHz...1GHz
- Amplitude Measurement Range -100...+10dBm
- Phase synchronous, Direct Digital Frequency Synthesis (DDS)
- Resolution Bandwidths (RBW): 20kHz and 500kHz
- Keypad for Frequency and Amplitude Setting
- Analog Signal Processing and Display
- Test Signal Output

# 1 GHz Spectrum Analyzer HM5510

All data valid at 23 °C after 30 minutes warm-up.

## Frequency Characteristics

Frequency Range:	0.15 MHz...1.05 GHz
Stability:	±5 ppm
Aging:	±1 ppm/year
Frequency Resolution:	1 kHz (6½-digit in readout)
Center Frequency Range:	0...1.05 GHz
LO Frequency Generation:	TCXO with DDS (Digital Frequency Synthesis)
Span Setting Range:	Zero-Span and 1...1000 MHz (1-2-5 Sequence)
Marker:	
Frequency Resolution:	1 kHz, 6½-digit,
Amplitude Resolution:	0.5 dB, 3½-digit
Resolution Bandwidths (RBW) @3dB:	500 kHz and 20 kHz
Video filter (VBW):	4 kHz
Sweep Time:	20 ms

## Amplitude Characteristics (Marker Related) 150 kHz...1 GHz

Measurement Range:	-100...+10 dBm
Scaling:	10 dB/div.
Display Range:	80 dB (10 dB/div.)
Amplitude Frequency Response (at 10 dB Attn., Zero Span and RBW 500 kHz, Signal -20 dBm):	±3 dB
Display (CRT):	8 x 10 division
Amplitude Scale:	logarithmic
Display Units:	dBm
Parameter Display (LCD):	2 Lines x 20 Characters, Center Frequency, Span, Marker Frequency, Reference Level, Marker Level
Input Attenuator Range:	0...40 dB (10 dB increments)
Tolerance of input attenuator:	±2 dB relative to 10 dB position
Max. Input Level (continuous)	
10...40 dB attenuation:	+20 dBm (0.1 W)
0 dB attenuation:	+10 dBm
Max. DC Voltage:	±25 V
Max. Reference Level:	-50...+10 dBm
Reference Level Accuracy rel. to 500 MHz, 10 dB Attn., Zero Span and RBW 500 kHz:	±2 dB
Min. Average Noise Level:	approx. -100 dBm (RBW 20 kHz)
Intermodulation Ratio (3 <sup>rd</sup> Order):	typical >75 dBc (2 Signals: 200 MHz, 203 MHz, -3 dB below Reference Level)
Harmonic Distortion Ratio (2 <sup>nd</sup> harm.):	typical >75 dBc (200 MHz, Reference Level)
Bandwidth Dependent Amplitude Error rel. to RBW 500 kHz and Zero Span:	±1 dB

## Inputs/Outputs

Measurement Input:	N-socket
Input Impedance:	50 Ω
VSWR: (Attn. ≥10 dB)	typ. 1.5:1
Supply Voltage for Probes (HZ530):	6 V <sub>dc</sub>
Audio output (phone):	3.5 mm Ø jack
Test Signal output:	N-socket, output Impedance 50 Ω
Frequency:	10 MHz
Level:	0 dBm (±3 dB)

## Functions

Keyboard Input:	Center Frequency, Reference Level,
Rotary Encoder Input:	Center Frequency, Reference Level, Testsignal output Level, Marker, Intensity (CRT), Contrast (LCD)

## General information

CRT:	D14-363GY, 8 x 10 div. with internal graticule
Acceleration Voltage:	approx. 2 kV
Trace Rotation:	adjustable on front panel
Power Supply:	105...253 V, 50/60 Hz ±10 %, CAT II
Power Consumption:	approx. 31 W at 230 V/50 Hz
Safety class:	Safety class I (EN61010-1)
Operating temperature:	+5...+40 °C
Storage temperature:	-20...+70 °C
Rel. humidity:	5...80 % (non condensing)
Dimensions (W x H x D):	285 x 125 x 380 mm, with adjustable, lockable tilt handle
Weight:	approx. 5.6 kg

**Accessories supplied:** Line Cord, Operators Manual, 2x HZ21 Adapter Plug (N-plug with BNC socket)

### Recommended accessories:

HZ20	Adapter, BNC to 4 mm banana
HZ33	Test cable 50 Ω, BNC/BNC, 0.5 m
HZ34	Test cable 50 Ω, BNC/BNC, 1 m
HZ43	19"-Rackmount Kit 3RU
HZ520	Antenna
HZ525	50 Ω-Termination, N plug
HZ530	Near Field Probe Set for EMI Diagnosis
HZ560	Transient Limiter
HZ575	Converter 75 Ω to 50 Ω
HZ030	Active probe 1 GHz (0.9 pF, 1 MΩ, including many accessories)