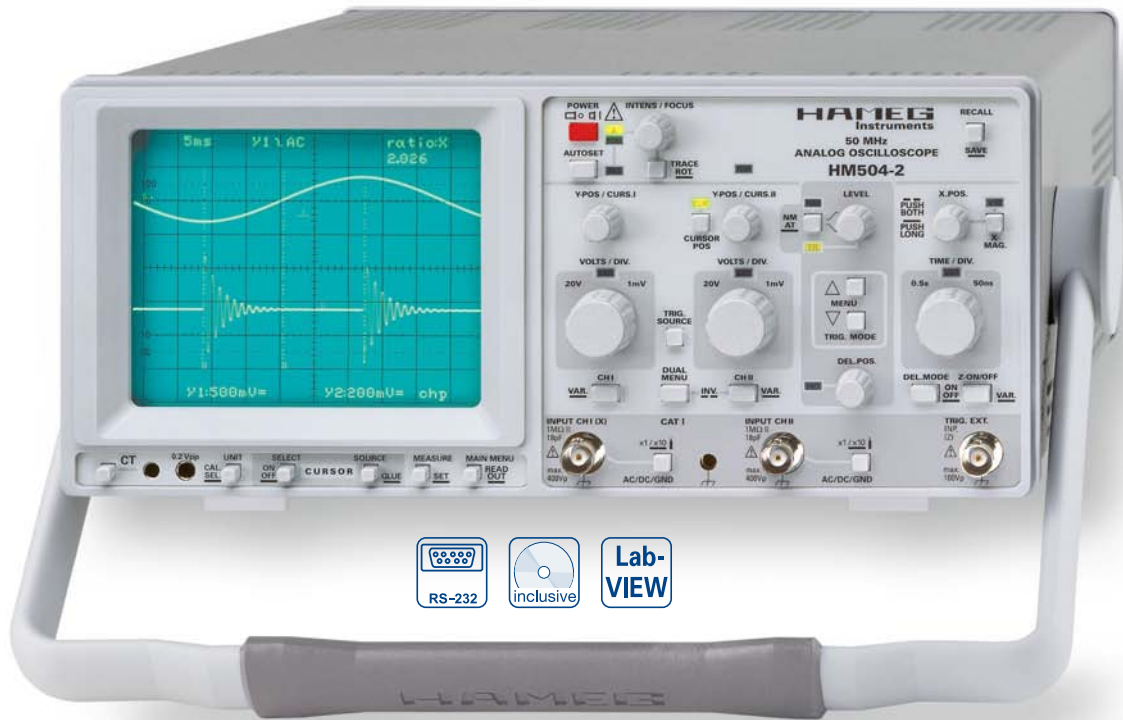
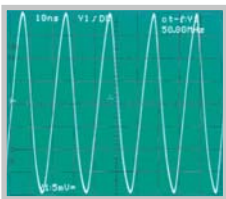


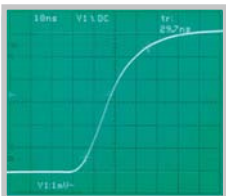
50MHz Analog Oscilloscope HM504-2



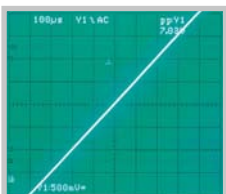
Full Screen Display of
50MHz Sine Wave



Rise-Time Measurement
with Cursor



Optimum Deflection
Linearity



- ✓ 2 Channels with Deflection Coefficients 1mV/div....20V/div.
- ✓ Time Base 50ns/div....0.5s/div., with X Magnification to 10ns/div.
- ✓ Low Noise Measuring Amplifiers with high Pulse Fidelity
- ✓ Triggering 0...100MHz from 5mm Signal Level
- ✓ Time Base Delay provide high X Magnification of any Portion of the Signal
- ✓ 100MHz 4-Digit Frequency Counter, Cursor and Automatic Measurement
- ✓ Save/Recall Memories for Instrument Settings
- ✓ Readout, Autoset, no Fan
- ✓ Yt, XY and Component-Test Modes
- ✓ RS-232 Interface (for Parameter Queries and Control only)

50 MHz Analog Oscilloscope HM504-2

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

Vertical Deflection

Operating Modes:	Channel 1 or 2 only Channels 1 and 2 (alternate or chopped) Sum or Difference of CH 1 and CH 2
Invert:	CH 2
XY Mode:	CH 1 (X) and CH 2 (Y)
Bandwidth:	2 x 0...50 MHz (-3 dB)
Rise Time:	<7 ns
Deflection Coefficient:	1-2-5 Sequence
1...2 mV/div.:	±5% (0...10 MHz (-3 dB))
5 mV/div...20 V/div.:	±3% (0...50 MHz (-3 dB))
Variable (uncalibrated):	>2.5:1 to >50V/div.
Input Impedance:	1 MΩ 15 pF
Input Coupling:	DC, AC, GND (ground)
Max. Input Voltage:	400V (DC + peak AC)

Triggering

Automatic (Peak to Peak):	20 Hz...100 MHz (≥5 mm)
Normal with Level Control:	0...100 MHz (≥5 mm)
Slope:	Rising or falling
Sources:	Channel 1 or 2, CH 1/CH 2 alternate (≥8 mm), Line and External
Coupling:	AC (10 Hz...100 MHz), DC (0...100 MHz), HF (50 kHz...100 MHz), LF (0...1.5 kHz)
Trigger Indicator:	LED
Triggering after Delay:	with Level Control and Slope selection
External Trigger Signal:	≥0.3 V _{pp} (0...50 MHz)
Active TV sync. separator:	Field and Line, +/-

Horizontal Deflection

Time Base:	50 ns/div...0.5 s/div. (1-2-5 Sequence)
Accuracy:	±3%
Variable (uncalibrated):	>2.5:1 to >1.25 s/div.
X Magnification x10:	up to 10 ns/div. (±5%)
Accuracy:	±5%
Delay (selectable):	200 ns...140 ms (variable)
Hold-Off Time:	variable to approx. 10:1
XY	
Bandwidth X amplifier:	0...3 MHz (-3 dB)
XY Phase shift <3°:	<120 kHz

Operation/Readout/Control

Manual:	via controls
Autoset:	automatic signal related parameter settings
Save and Recall:	9 instrument parameter settings
Readout:	display of menu, parameters, cursors and results
Autom. Measurement:	Freq./Period, V _{dc} , V _{pp} , V _{p+} , V _{p-} , Trigger Level
Cursor Measurement:	Δt, 1/Δt, tr, ΔV, V to GND, Gain, Ratio X and Y
Frequency counter:	4 digit (0.01% ±1 digit) 0.5 Hz...100 MHz
Interface:	RS-232 (Device control and Parameter query, no CRT content transfer possible)

Component Tester

Test Voltage:	approx. 7V _{rms} (open circuit)
Test Current:	max. 7 mA _{rms} (short-circuit)
Test Frequency:	approx. 50 Hz
Test Connection:	2 banana jacks 4 mm Ø

One test circuit lead is grounded via protective earth (PE)

Miscellaneous

CRT:	D14-363GY, 8 x 10 div. with internal graticule
Acceleration Voltage:	approx. 2 kV
Trace Rotation:	adjustable on front panel
Z-input (Intens. modulation):	max. + 5V (TTL)
Calibrator Signal (Square Wave):	0.2V, 1 Hz...1 MHz (tr <4 ns), DC
Power Supply (Mains):	105...253V, 50/60 Hz ±10%, CAT II
Power Consumption:	approx. 34 Watt at 230V/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
Weight:	approx. 5.4 kg

Accessories supplied: Line Cord, Operators Manual and Software for Windows on CD-ROM, 2 Probes 1:1/10:1 (HZ154),

Recommended accessories:

HZ14	Interface cable (serial) 1:1
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
HZ51	Probe 10:1 (150 MHz)
HZ52	Probe 10:1 RF (250 MHz)
HZ53	Probe 100:1 (100 MHz)
HZ100	Differential probe 20:1/200:1
HZ109	Differential probe 1:1/10:1
HZ115	Differential probe 100:1/1000:1
HZ200	Probe 10:1 with auto attenuation ID (250 MHz)
HZ350	Probe 10:1 with automatically identification (350 MHz)
HZ355	Slimline probe 10:1 with automatically identification (500 MHz)
HZ020	High voltage probe 1000:1 (400 MHz, 1000 V _{rms})
HZ030	Active probe 1 GHz (0.9 pF, 1 MΩ, including many accessories)
HZ050	AC/DC Current probe 20 A, DC...100 kHz
HZ051	AC/DC Current probe 1000 A, DC...20 kHz