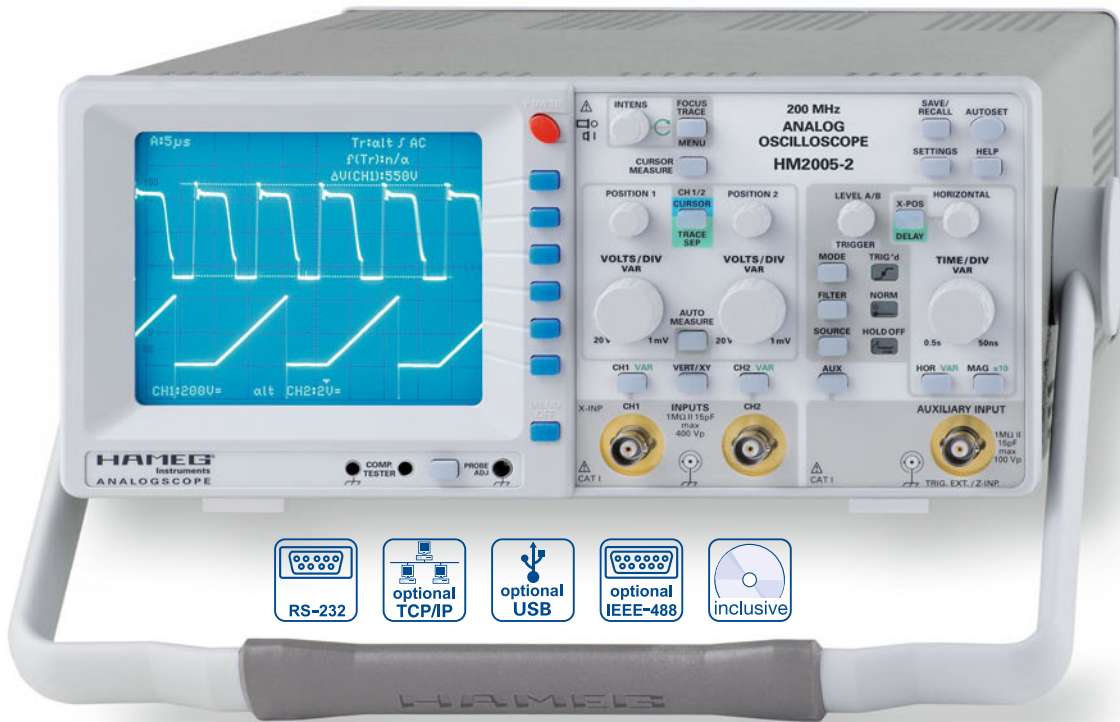
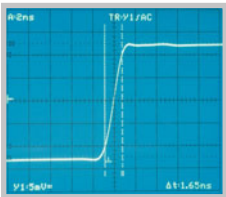


200MHz Analog Oscilloscope HM2005-2

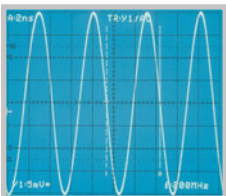
HM2005-2



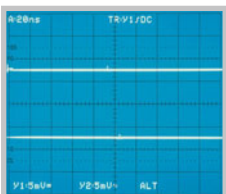
Even fast rising edges do not cause overshoot



Full screen display of 200 MHz signal



Low noise amplifiers



- 2 Channels with deflection coefficients 1 mV/div...5V/div.
- 2 Time Bases: 2 ns/div...0.5 s/div. and 2 ns/div...20 ms/div.
- Low Noise Measuring Amplifiers with high pulse fidelity
- Videotrigger: Odd and even frames, Line Selection (525/60 and 625/50 standard)
- 250MHz 6-Digit Frequency Counter, Cursor and Automatic Measurement
- 14kV high writing speed CRT, Readout, Autoset, Delay Line, no Fan
- Save/Recall Memories for Instrument Settings
- Help Function, Multilingual Menu
- RS-232 Interface (for parameter queries and control only)

200 MHz Analog Oscilloscope HM2005-2

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

Vertical Deflection

Channels:	2
Operating Modes:	CH 1 or CH 2 separate, DUAL (CH 1 and CH 2 alternate or chopped), Addition
X in XY-Mode:	CH 1
Invert:	CH 1, CH 2
Bandwidth (-3 dB):	2 x 0...200 MHz
Rise time:	< 1,75 ns
Bandwidth Limiter (switchable):	approx. 20 MHz (1 mV/div...5 V/div.)
Deflection Coefficients (CH 1, 2):	12 calibrated steps
1...2 mV/div.:	± 3% (0...100 MHz (-3 dB))
5 mV...5 V/div.:	± 3% (1-2-5 sequence)
variable (uncalibrated):	> 1 mV/div...5 V/div., continuous
Inputs CH 1, 2:	
Impedance:	1 MΩ 13 pF
Coupling:	DC, AC, 50 Ω, GND (ground)
Max. Input Voltage:	250 V (DC + peak AC), 50 Ω < 5 V _{rms}
Y Delay Line (analog):	70 ns
Measuring Circuits:	Measuring Category I
Auxiliary input:	
Function (selectable):	Ext. Trigger, Z (unblank)
Coupling (Ext. Trig./Z):	all/AC, DC
Max. input voltage:	100 V (DC + peak AC)

Triggering

Automatic (Peak to Peak):	
Min. signal height:	5 mm
Frequency range:	10 Hz...250 MHz
Level control range:	from Peak- to Peak+
Normal (without peak):	
Min. signal height:	5 mm
Frequency range:	0...250 MHz
Level control range:	-10...+10 div.
Operating modes:	Slope/Video
Slope:	Rising, falling, both
Sources:	CH 1, CH 2, alt. CH 1/2 (≥ 8 mm), Line, Ext.
Coupling:	AC: 10 Hz...250 MHz DC: 0...250 MHz HF: 30 kHz...250 MHz LF: 0...5 kHz Noise Rej. switchable
Video:	pos./neg. Sync. Impulse
Standards:	525 Line / 60 Hz Systems 625 Line / 50 Hz Systems
Field:	even/odd/both
Line:	all/line number selectable
Source:	CH 1, CH 2, Ext.
Indicator for trigger action:	LED
External Trigger via:	AUXILIARY INPUT (0.3 V _{pp} 0...200 MHz)
Coupling:	AC, DC
Max. input voltage:	100 V (DC + peak AC)
2nd Trigger	
Min. signal height:	5 mm
Frequency range:	0...250 MHz
Coupling:	DC
Level control range:	-10...+10 div.

Horizontal Deflection

Time Base	
Operating modes:	A, ALT (alternating A/B), B
Time base A:	20 ns/div...0.5 s/div. (1-2-5 sequence)
Time base B:	20 ns/div...20 ms/div. (1-2-5 sequence)
Accuracy A and B:	± 3%
X Magnification x10:	to 2 ns/div.
Accuracy:	± 5%
Variable time base A/B :	cont. 1:2.5
Hold Off time:	var. 1:10 (LED-Indication)
XY Mode	
Bandwidth X-Amplifier:	0...3 MHz (-3 dB)
X Y phase shift:	< 3° < 220 kHz

Operation / Measuring / Interfaces

Operation:	Menu (multilingual), Autoset, Help functions (multilingual)
Save/Recall internal:	9 Instrument parameter settings
Signal sources:	CH 1, CH 2
Frequency counter:	
6 digit resolution:	> 1 MHz...250 MHz
5 digit resolution:	0.5 Hz...1 MHz
Accuracy:	50 ppm
Auto Measurements:	Frequency, Period, V _{dcr} , V _{pp} , V _{p+} , V _{p-}
Cursor Measurements:	Δt, 1/Δt (f), tr, ΔV, V to GND, ratio X, ratio Y
Resolution Readout / Cursor:	1000 x 2000 Pts
Interfaces:	RS-232 ¹⁾

Display

CRT:	D14-375GH
Display area (with graticule):	8 div. x 10 div.
Acceleration voltage:	approx. 14 kV

General Information

Component tester	
Test voltage:	approx. 7V _{rms} (open circuit), approx. 50 Hz
Test current:	max. 7 mA _{rms} (short circuit)
Reference Potential:	Ground (safety earth)
Probe ADJ Output:	1 kHz/1 MHz square wave signal 0.2 V _{pp} (tr < 4 ns)
Trace rotation:	electronic
Line voltage:	105...253 V, 50/60 Hz ± 10%, CAT II
Power consumption:	42 Watt at 230 V, 50 Hz
Protective system:	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:	5.6 kg

¹⁾ Device control and Parameter query, no CRT content transfer possible.

Accessories supplied: Line Cord, Operators Manual and Software for Windows on CD-ROM, 2 Probes 10:1 (HZ200), RS-232 Interface (HO710)

Optional accessories:

HO720	Dual-Interface USB/RS-232
HO730	Dual-Interface Ethernet/USB
HO740	Interface IEEE-488 (GPIB)
HZ13	Interface cable (USB) 1,8m
HZ14	Interface cable (serial) 1:1
HZ20	Adapter, BNC to 4mm banana
HZ33	Test cable 50Ω, BNC/BNC, 0,5m
HZ34	Test cable 50Ω, BNC/BNC, 1m
HZ45	19"-Rackmount Kit 4RU
HZ51	Probe 10:1 (150MHz)
HZ52	Probe 10:1 RF (250MHz)
HZ53	Probe 100:1 (100MHz)
HZ56-2	AC/DC Current probe
HZ70	Opto-Interface (with optical fiber cable)
HZ72	GPIB-Cable 2m
HZ100	Differential probe 20:1 / 200:1
HZ109	Differential probe 1:1 / 10:1
HZ115	Differential probe 100:1 / 1000:1
HZ154	Standard probe 1:1 / 10:1
HZ350	Probe 10:1 with automatically identification (350MHz)
HZ355	Slimline probe 10:1 with automatically identification (500MHz)
HZO20	High voltage probe 1000:1 (400MHz, 1000Vrms)
HZO30	Active probe 1GHz (0,9pF, 1MΩ, including many accessories)
HZO50	AC/DC Current probe 20A, DC...100kHz
HZO51	AC/DC Current probe 1000A, DC...20kHz

HAMEG Distributor:



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