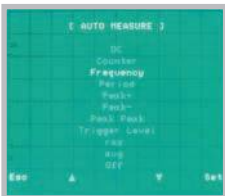


50 MHz Analog - / Digital Oscilloscope HM507

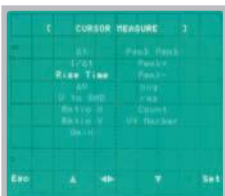


Specifications and functions, see HM504-2

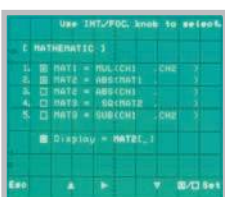
Automatic measurements



Cursor measurement



Signal processing with user-defined formulas



Digital mode:

Single, Refresh, Envelope, Average, Roll and XY modes

Low-Noise 8-bit Flash A/D Converters with max. 100 MSa/s
Real Time Sampling, 2 GSa/s Random Sampling and 2 kPts
Memory per Channel

Pre-/Post-Trigger - 10 cm to +10 cm

Digital Time Base 100 s – 100 ns/cm, with X Magnification up
to 20 ns/cm

Programmable Mathematical Signal Processing

RS-232 interface for control and signal data transfer, incl.
Windows® software



50 MHz Analog/Digital Oscilloscope HM507

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

Vertical Deflection

Operating Modes:	Channel I or II only Channels I and II (alternate or chopped) Sum or Difference of CH I and CH II
Invert:	CH II
XY Mode:	via CH I (X) and CH II (Y)
Bandwidth:	2 x 0 – 50 MHz (-3 dB)
Rise Time:	< 7 ns
Overshoot:	max. 1 %
Deflection Coefficients:	1-2-5 Sequence 1 mV/div. – 2 mV/div.: ± 5 % (0 to 10 MHz (-3 dB)) 5 mV/div. – 20 V/div.: ± 3 % (0 to 50 MHz (-3 dB)) Variable (uncalibrated): > 2.5: 1 to > 50 V/div.
Input Impedance:	1 MΩ 18 pF
Coupling:	DC, AC, GND (ground)
Max. Input Voltage:	400 V (DC + peak AC)

Triggering

Automatic (Peak to Peak):	20 Hz – 100 MHz (≥ 5 mm)
Normal with Level Control:	0 – 100 MHz (≥ 5 mm)
Slope:	positive or negative
Sources:	Channel I or II, CH I/CH II 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:	with 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, +/-

Horizontalablenkung (analog u. digital)

Analog	
Time Base:	0.5 s/div. – 50 ns/div. (1-2-5 Sequence)
Accuracy:	± 3 %
Variable (uncalibrated):	> 2.5: 1 to > 1.25 s/div.
X-Magnification x 10:	up to 10 ns/div. (± 5 %)
Accuracy:	± 5 %
Delay (selectable):	140 ms – 200 ns (variable)
Hold-Off Time:	variable to approx. 10 : 1
XY Mode	
Bandwidth X amplifier:	0 – 3 MHz (-3 dB)
XY Phase shift < 3°:	< 120 kHz
Digital	
Time Base:	100 s/div. – 100 ns/div. (1-2-5 Sequence)
Accuracy:	± 2 %
X Magnification x 10:	up to 20 ns/div.
Accuracy:	± 2 %
XY Mode	
Bandwidth X Amplifier :	0 - 50 MHz (-3 dB)
XY Phase shift < 3°:	< 10 MHz

Digital Storage

Operating Modes:	Refresh, Roll, Single, XY, Envelope, Average, Random Sampling
Interpolation:	Linear Dot Join Function
Sampling Rate (Real Time):	max 100 MSa/s, 8 bit Flash A/D Converter
Sampling Rate (Random):	2 GSa/s relative

Post/Pre-Trigger:	-10 div. to + 10 div. (continuous)
Display Refresh Rate:	max. 180/s
Bandwidth:	2 x 0 – 50 MHz (-3 dB)
Rise Time, Overshoot:	< 7 ns, ≤ 1 %
Signal Memory:	3 x 2 k x 8 bit
Reference Signal Memory:	3 x 2 k x 8 bit
Mathematical Signal Memory:	3 x 2 k x 8 bit
Resolution (dots/div.) Yt Mode:	X: 200/div., Y: 25/div.
Resolution (dots/div.) XY Mode:	X: 25/div., Y: 25/div.

Operation / Readout / Control

Manual:	via controls
Autoset:	automatic signal related parameter settings
Save and Recall:	9 user defined parameter settings
Readout:	display of menu, parameters, cursors and results
Auto Measurements:	
 Analog mode:	Frequency, Period, V _{DC} , V _{pp} , V _{p+} , V _{p-} ,
 also in digital mode:	V _{rms} , V _{average}
Cursor Measurements:	
 Analog mode:	ΔV, Δt, 1/Δt (f), tr, ΔV, V to GND, ratio X and Y
 also in digital mode:	Pulse count, Vt related to Trigger Point, Peak to Peak, Peak+, Peak-
Frequency counter:	4 digit (0.01 % ± 1 digit) 0.5 Hz – 100 MHz
Interface (standard fitting):	RS-232 (Control, Signal Data)
Interface Option:	H079-6 (IEEE-488, RS-232, Centronics)

Component Tester

Test Voltage:	approx. 7 V _{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 cm with internal graticule
Acceleration Voltage:	approx. 2 kV
Trace Rotation:	adjustable on front panel
Z-Input (Intens. modulation, analog):	max. + 5V (TTL)
Calibrator Signal (Square Wave):	0.2 V ± 1 %, 1 Hz - 1 MHz (tr < 4 ns), DC
Power Supply (Mains):	105-253 V, 50/60 Hz ± 10 %, CAT II
Power Consumption:	approx. 42 Watt at 230 V/50 Hz
Min./max. Ambient temperature:	0° C...+40° C
Safety class:	Safety class I (EN61010-1)
Weight:	approx. 6.0 kg
Dimensions (W x H x D):	285 x 125 x 380 mm

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

Optional accessories: Multifunction Interface H079-6, Opto Interface (with optical fiber cable) HZ70

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