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Test & Measurement

- sales
- rentals
- calibration
- repair
- disposal

Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

If you click on the "Click-to-Call" logo below, you can all us for FREE!

TMG Corporate Website **TMG Products Website**

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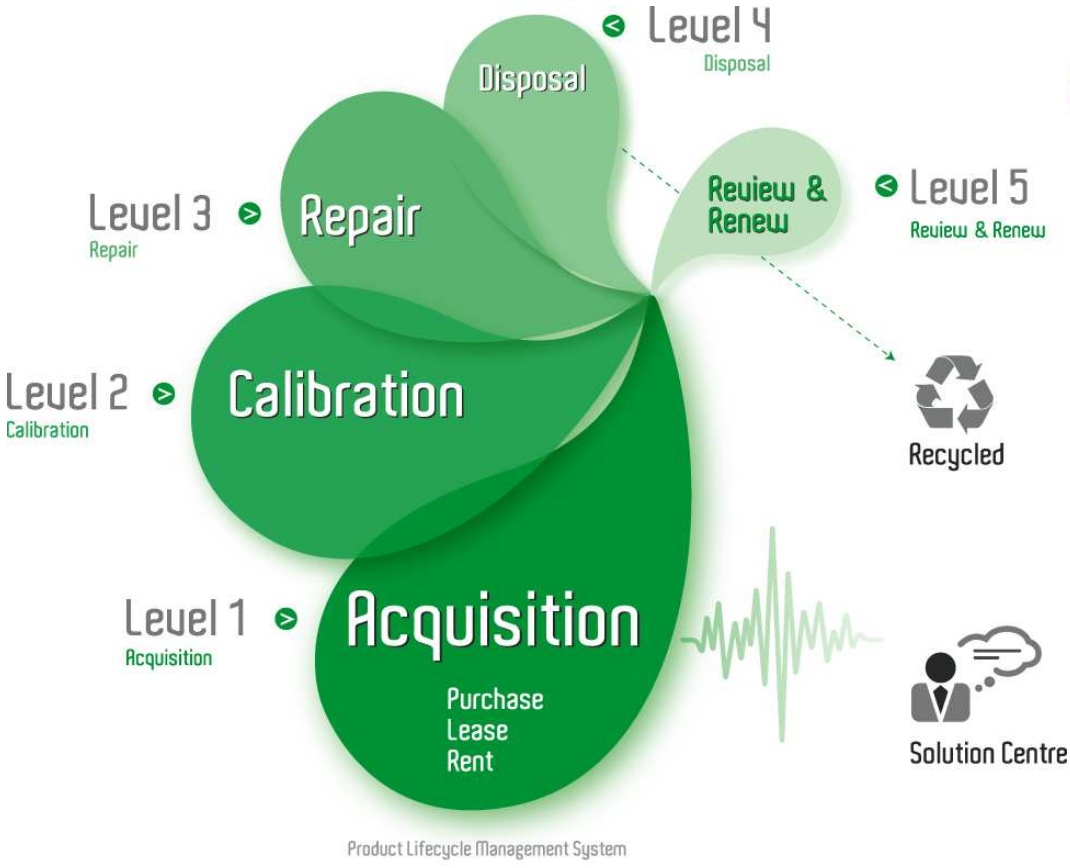
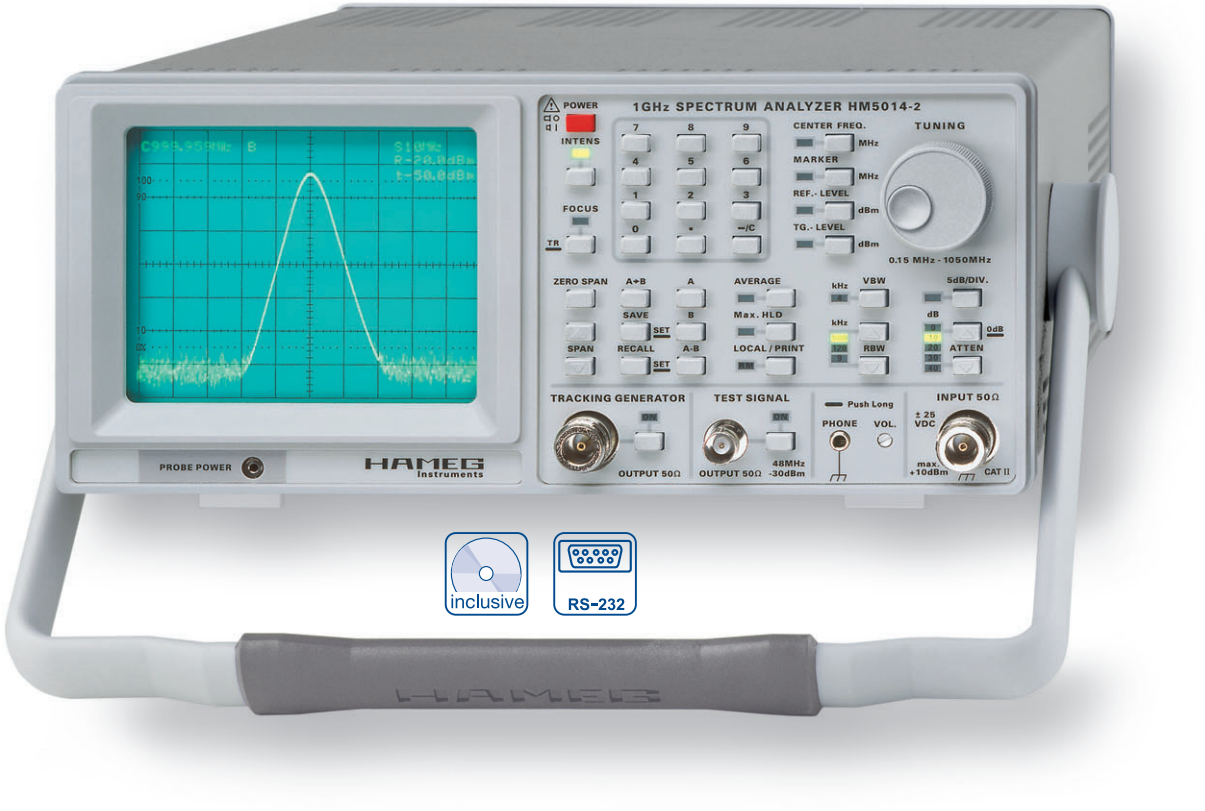


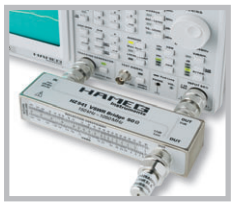
HAMEG Instruments

1 GHz Spectrum Analyzer
HM5014-2

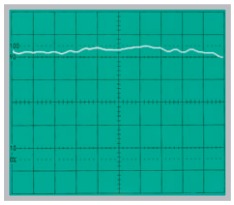
HM5014-2



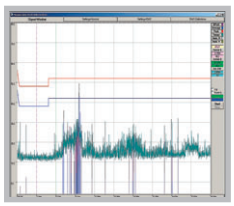
VSWR Test Unit HZ541



Amplifier frequency response measured using a tracking generator



Measurement of line-conducted interference



- Frequency range from 150 kHz to 1 GHz
- Amplitude measurement range from -100 dBm to +10 dBm
- Phase Synchronous, Direct Digital frequency Synthesis (DDS)
- Resolution bandwidths (RBW): 9 kHz, 120 kHz and 1 MHz
- Pre-compliance EMI measurements
- Software for documentation included
- Software for extended measurement functions for EMI measurements included
- Tracking Generator with output amplitude from -50 dBm to +1 dBm
- Serial interface for documentation and control

1 GHz Spectrum Analyzer HM5014-2

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

Frequency Characteristics

Frequency Range :	0.15 MHz to 1.050 GHz
Stability:	± 5 ppm
Ageing:	± 1 ppm/year
Frequency Resolution:	1 kHz (6 ½ digit in readout)
Center Frequency Range:	0 to 1.050 GHz
LO Frequency Generation:	TCXO with DDS (Digital Frequency Synthesis)
Span Setting Range:	Zero Span and 1 MHz –1000 MHz (1-2-5 Sequence)
Marker:	
Frequency Resolution:	1 kHz, 6 ½ digit,
Amplitude Resolution:	0.4 dB, 3 ½ digit
Resolution Bandwidths (RBW) @ 6dB:	1 MHz, 120 kHz and 9 kHz
Video Bandwidth (VBW):	4 kHz
Sweep Time (automatic selection):	40 ms, 320 ms, 1 s*)

Amplitude Characteristics (Marker Related) 150 kHz – 1 GHz

Measurement Range:	-100 dBm to +10 dBm
Scaling:	10 dB/div., 5 dB/div.
Display Range:	80 dB (10 dB/div.), 40 dB (5 dB/div.)
Amplitude Frequency Response (at 10 dB Attn., Zero Span and RBW 1 MHz, Signal – 20 dBm):	± 3 dB
Display (CRT):	8 x 10 division
Amplitude Scale:	logarithmic
Display units:	dBm
Input Attenuator Range:	0 – 40 dB (10 dB-increments)
Tolerance of input attenuator:	± 2 dB relative to 10 dB position
Max. Input Level (continuous)	
40 dB attenuation:	+20 dBm (0,1 W)
0 dB attenuation:	+10 dBm
Max. DC Voltage:	± 25 V
Max. Reference Level: +10 dBm	
Reference Level Accuracy rel. to 500 MHz, 10 dB Attn., Zero Span and RBW 1 MHz:	± 1 dB
Min. Average Noise Level:	ca. -100 dBm (RBW 9 kHz)
Intermodulation Ratio (3rd Order):	typical ›75 dBc (2 Signals: 200 MHz, 203 MHz, -3 dB below Reference Level)
Harmonic Distortion Ratio (2nd harm.):	typical › 75dBc (200MHz, Reference Level)
Bandwidth Dependent Amplitude Error rel. to RBW 1 MHz and Zero Span:	± 1 dB
Digitization Error:	±1 digit (0.4 dB) at 10 dB/div. scaling (Average, Zero Span)

Inputs/Outputs

Measuring Input:	N socket
Input Impedance:	50 Ω
VSWR: (Attn. ≥ 10 dB)	typ. 1.5:1
Tracking Generator Output:	N-socket
Output Impedance:	50 Ω
Test Signal Output:	BNC-Buchse
Frequency, Level:	48 MHz, -30 dBm (± 2 dB)
Supply Voltage for Probes (HZ 530):	6 V DC
Audio Output (phone):	3.5mm Ø jack
RS-232 Interface:	9pol./Sub-D

Functions

Keyboard Input:	Center Frequency, Reference Level, Tracking Generator Level
Rotary Encoder Input:	Center Frequency, Reference Level, Marker, Tracking Generator Level
Max. Hold Detection:	Peak Value Acquisition
Quasi-Peak Detection:*	Quasi-Peak Valuation
Average:	Mean Value Acquisition
Ref. Spectrum Memory:	2 k x 8 bit
SAVE / RECALL:	Save and Recall of 10 Instrument Settings
AM demodulation:	for audio
LOCAL:	RS-232 Remote Control OFF
Readout:	Display of various Measurement Parameters

Tracking Generator

Frequency Range:	0.15 MHz to 1.050 GHz
Output Level:	-50 dBm to +1 dBm
Frequency Response (0.15 MHz – 1 GHz)	
+1 dBm to -10 dBm:	± 3 dB
-10,2 dBm to -50 dBm:	± 4 dB
Digitization Error:	± 1 digit (0.4 dB)
Spurious Outputs	better than 20 dBc

General information

CRT:	D14-363GY, 8 x 10 cm with internal graticule
Acceleration Voltage:	approx. 2 kV
Trace Rotation:	adjustable on front panel
Ambient Temperature:	10° C to 40° C
Power Supply:	105-253 V, 50 / 60 Hz ± 10 %, CAT II
Power Consumption:	approx. 35 W at 230V/50 Hz
Safety Class	Safety Class I (EN61010-1)
Dimensions (W x H x D):	285 x 125 x 380 mm
Weight:	approx. 6.5 kg

*) in combination with software AS100E only

Accessories supplied: Line Cord, Operators Manual, HZ21 Adapter Plug (N-plug with BNC socket) and Software for Windows on CD-ROM

Optional accessories:

HZ70 Opto-Interface (with optical fiber cable)

HZ520 Antenna

HZ530 Near Field Probe Set for EMI Diagnosis

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