

3 GHz Spectrum Analyzer HM5530



NEW

Frequency range 100 kHz to 3 GHz

Amplitude measurement range -110 dBm to +20 dBm

Phase synchronous direct digital frequency synthesis

Resolution bandwidths (RBW): 9 kHz, 120 kHz and 1 MHz

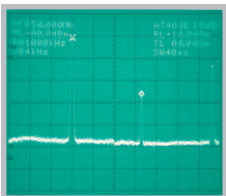
YIG oscillator

Pre-compliance emi measurements

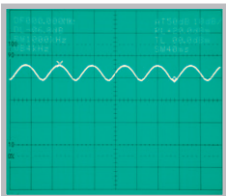
Software for extended measurement functions for emi measurements included

RS-232 Interface, optional: RS-232/USB

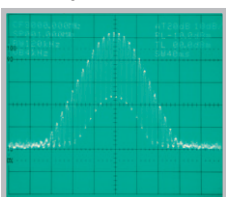
Test signal 50 MHz



Externally triggered AM signal (zero span)



Amplitude modulated 3 GHz signal



3 GHz Spectrum Analyzer HM 530

(Valid at 23 degr. C after a 30 min. warm-up period.)

Frequency characteristics

Frequency range:	100 kHz to 3 GHz
Frequency generation:	TXCO with DDS (Digital Frequency Synthesis)
Stability:	± 5 ppm
Ageing:	± 1 ppm/year
Frequency resolution:	1 kHz (6½-digit readout)
Center frequency range:	0 to 3 GHz
Tolerance of center frequency:	± 1 kHz
Span setting range:	0 (zero span) and 1 to 3000 MHz

Amplitude characteristics

Display range:	-110 dBm to +20 dBm
Scaling, units:	10 or 5 dB/div, dBm, dBmV, dBµV selectable
Dynamic range:	80 dB (10 dB/div), 40 dB (5 dB/div)
Amplitude frequency response (ATT 10 dB, zero span, 1 MHz-RBW signal level -20 dBm):	± 3 dB
Display (CRT):	8 cm x 10 cm
Display characteristic:	logarithmic
Display units:	dB (dBm, dBmV, dBµV)
Input attenuator:	0 to 50 dB in 10 dB increments
Tolerance:	± 2 dB, referred to 10 dB
Maximum continuous input level:	
Attenuation 0 to 50 dB:	+ 20 dBm (0.1 W)
Attenuation 0 dB:	+ 10 dBm
Maximum input dc voltage:	± 25 V
Reference level:	
Adjustment range:	-110 dBm to +20 dBm
Tolerance (1500 MHz, ATT 10 dB, Zero Span, RBW 1 MHz):	± 1 dB
Min. average noise level (RBW 9 kHz):	
150 kHz - 1.5 MHz:	-90 dBm
1.5 MHz - 2.6 GHz:	-100 dBm
2.6 GHz - 3.0 GHz:	-90 dBm
3 rd order intermodulation (2 signals of):	
-33 dBm each, frequency difference > 3 MHz:	> 75 dBc
2 nd order harmonic distortions (2 nd harmonic at a signal level of -30 dBm, ATT 0 dB, frequency difference > 3 MHz):	> 75 dBc
Bandwidth dependent frequency response amplitude tolerance	
amplitude tolerance (relative to RBW 1 MHz, zero span):	± 1 dB
Digitization:	± 1 Digit (0.4 dB) at 10 dB/div scaling (average, zero span)

Marker/Deltamarker

Frequency resolution:	span/2000, max. 1 kHz, 6½-digit
Frequency accuracy:	± (1 kHz + tolerance of center frequency + 0.02% x span)
Amplitude resolution:	0.4 dB, 3½-digit

Bandwidths

Resolution bandwidths (RBW) at -6 dB:	1 MHz, 120 kHz, 9 kHz
Videobandwidth (VBW):	50 kHz, 4 kHz
with automatic selection of sweep time:	40, 80, 160, 320 und 1000 ms

Inputs/Outputs

Measuring input:	N connector
Input impedance:	50 Ω
VSWR (ATT 10 dB):	typ. 1.5 : 1
Testsignal output:	N connector
Output impedance:	50 Ω
Frequency:	50 MHz ± 1 kHz
Level:	-10 to 0 dBm in 0.2 dB increments
Accuracy of level:	± 1 dB
Supply voltage for field probes:	6 V _{DC} , max. 100 mA (2.5 mm jack)
Audio output (PHONE):	3.5 mm jack
RS-232 interface:	9-pin. sub-D
External trigger input:	BNC connector
Digital signal:	
Low level:	0 to +0.8 V
High level:	+2.5 V to +5.0 V

Functions

Keyboard input:	Center frequency, span, start frequency, stop frequency, marker, deltamarker, reference level, test signal level
Rotary encoder input:	Center frequency, span, start frequency, stop frequency, marker, deltamarker, reference level, test signal level intensity, focus, trace rotation, volume
MAX HOLD:	Peak detection
AVG (average):	Averaging
Reference spectrum:	memory depth 2 k x 8 Bit
SAVE/RECALL:	Storage and recall of up to 10 instrument settings
AM demodulation:	for the PHONE output
REMOTE:	Display of remote/local control via RS-232 interface
Readout:	8 parameter display fields, display of keyboard inputs

Miscellaneous

Display (CRT):	D 14-363GY, 8 cm x 10 cm internal graticule
Acceleration voltage:	approx. 2 kV
Trace rotation:	adjustable on front panel
Ambient temperature range:	+10 to +40 °C
Storage temperature:	-40 to +70 °C
Power supply:	105 to 254 V _{AC} , 50 to 60 Hz, approx. 37 W CAT II
Safety class:	I (EN/IEC 61010-1) with protective earth
Dimensions (W x H x D):	285 x 125 x 380 mm Adjustable handle, as a tilt-stand or for convenient carrying
Colour:	techno-brown
Weight:	approx. 6.5 kg

Accessories supplied: Line cord, manual, CD-ROM, HZ21 Adapter N male to BNC female

Optional accessories:

HZ70 Opto-Interface (with optical fiber cable)
HZ520 Antenna
HZ530 Near Field Probe Set for EMI Diagnosis
HZ560 Transient Limiter
HZ575 75/50 ohm-converter

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