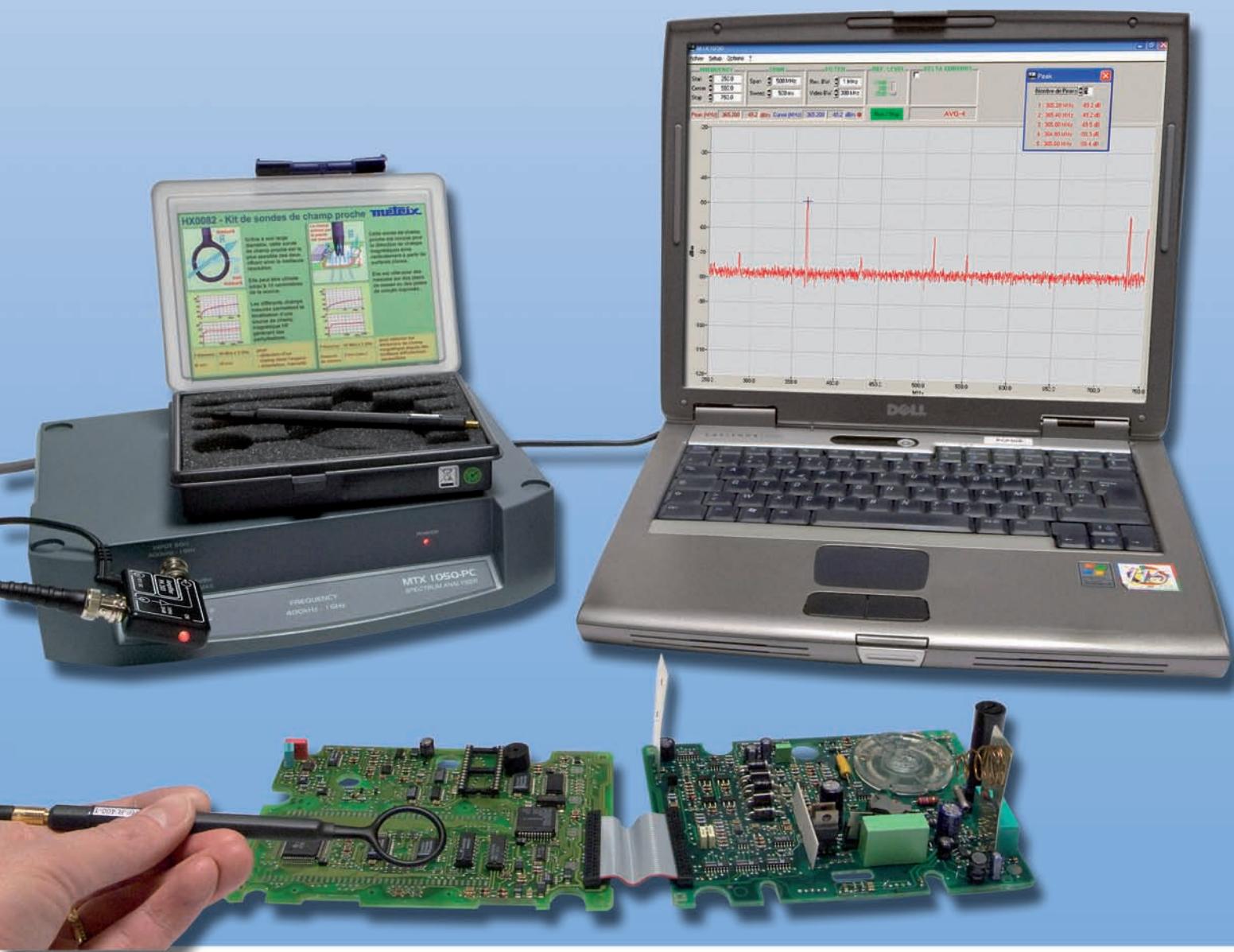


MTX 1050-PC

HX0082 & HX0083

A special kit for EMC prequalification measurements

- Multi-purpose frequency range from 400 kHz to 1 GHz
- Wide dynamic range for measurement from –90 dBm to +20 dBm
- 6 sweep rates, 3 analytical filters and 3 video filters, integrated FM demodulation
- Suitable for EMC tests with the near-field probes and 20 dB amplifier
- 4 simultaneous measurements (Auto Peak, Marker, 2 difference cursors)
- Windows environment: screenshots in reports, transfers into Excel



The **MTX 1050** spectrum analyser is hooked up directly to a PC by means of a "Plug & Play" USB connection and multilingual software. In this way, it benefits from the PC's **high-resolution colour display** and large screen, offering a horizontal resolution of up to 5,000 points.

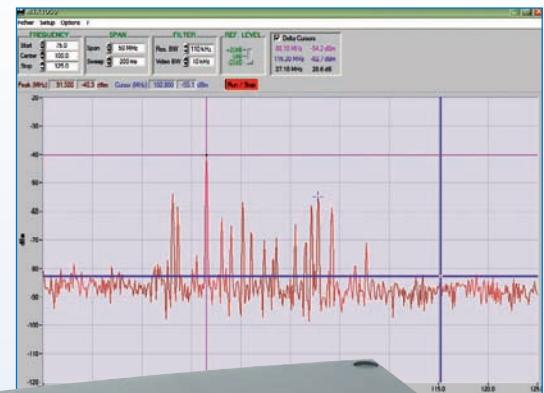
The PC's user-friendly ergonomics make it easy to produce reports, make screenshots or transfer data into Excel.

The **MTX 1050** also takes advantage of the PC's storage capacity.

This means the **MTX 1050**

benefits in addition from the constant technological developments on PC.

*Alongside the traditional applications, the **Q-Peak detection mode** allows measurements for **EMC prequalification** testing with the near-field probes.*



It is ideal for detecting disturbances originating from surfaces which are difficult to access.

For greater accuracy, the **HX0083** kit is a 20 dB amplifier which improves the measurements made by more clearly separating the signals from the noise floor.

	PROXIMITY PROBE	CONTACT PROBE
Frequency range	30 MHz – 3 GHz	
Output impedance	50 Ω	
Connector	BNC	
Dimensions	Ø 25 mm	Ø 150 mm
Measurement distance	10 cm	2 mm (max.)

HX0083 PREAMPLIFIER SPECIFICATIONS	
DC input voltage	7.5 V to 18 V
Current consumption	50 mA
Max. input voltage	25 VDC
Max. input power	+13 dB
Gain	20 dB
Noise	4.5 dB
Supply voltage	230 V / 50 Hz
Dimensions	5 x 38 x 13 mm

Electromagnetic Compatibility

Since 1996, all products marketed in Europe have had to comply with the standards concerning

EMC emission and immunity.

For measurement instruments, the generic standard is EN 61326-1.

During the various product design phases, EMC prequalification tests may be carried out.

These can be used to check whether an electronic system can operate correctly in an environment subject to electromagnetic disturbances.

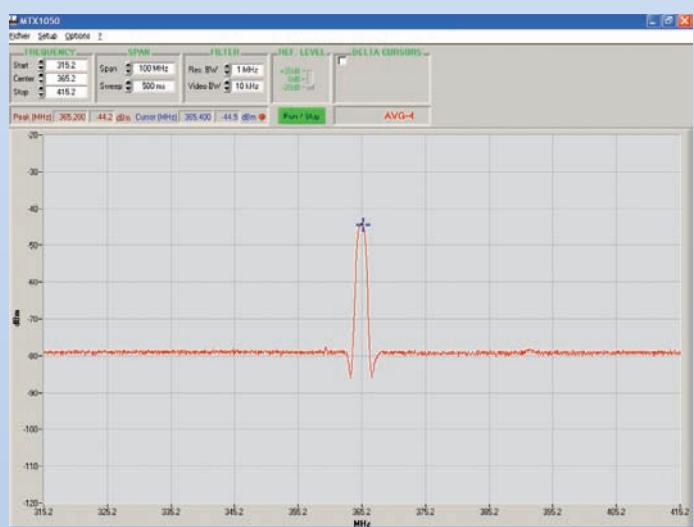
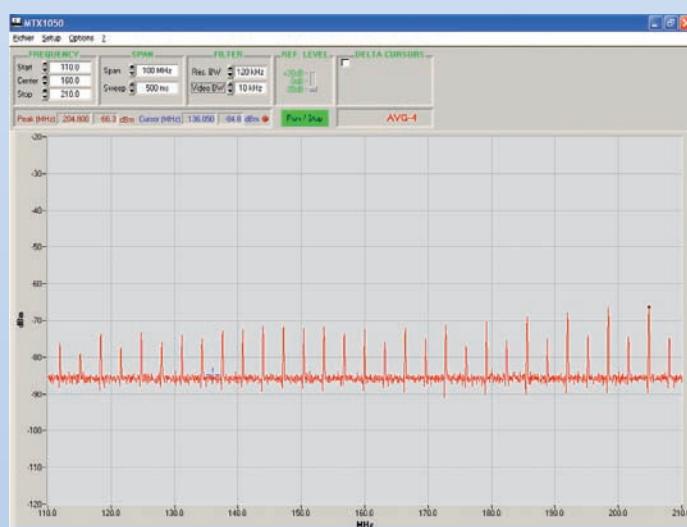


To be electromagnetically

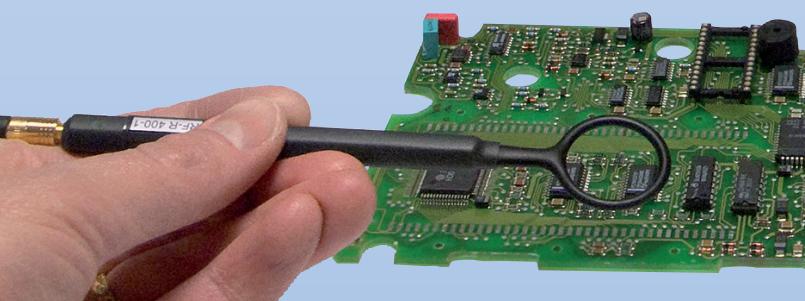
compatible, the electronic system must comply with the emission and immunity requirements, i.e.:

- not create any interference affecting other systems: the level of the electromagnetic disturbances produced must not exceed the threshold for satisfactory operation of the other equipment and instruments.
- not be sensitive to the emissions from other systems: the system must have sufficient immunity to electromagnetic disturbances to allow it to operate correctly.
- not cause any interference with itself (disturbances generated by the system's components or operation).

EXAMPLE OF DISTURBANCES DUE TO AN OSCILLATOR



EXAMPLE OF OBSERVATION OF A DISTURBANCE LINE AT 365 MHZ



400 kHz - 1 GHz spectrum analyser on PC

SPECIFICATIONS		MTX 1050
Frequency		
Display	Colour display, high resolution, large dimensions, on PC screen. Horizontal resolution of up to 5,000 sweep points (depending on speed). Vertical zoom (parameterizable 5 dB scale)	
Frequency range	400 kHz to 1 GHz	
Oscillator	Accuracy $\pm 0.625 \cdot 10^{-6}$	
Frequency drift	$\pm 5 \text{ ppm} / 1 \text{ year}$	
Frequency span	Zero Span, 1 MHz to 100 MHz / div - sequence 1-2-5	
Sweep	Normal or Single - 30 ms, 50 ms, 100 ms, 200 ms, 500 ms, 1 s	
Detection modes	Peak (1 to 10 Peaks displayed simultaneously) or Q-Peak (EMC analysis; sweep time 1 s, RBW 120 kHz)	
Analysis band		
Resolution filters (RBW)	12 kHz, 120 kHz and 1 MHz	
Video filters (VBW)	1 kHz, 10 kHz and 300 kHz	
Amplitude		
Reference levels	-20 dBm, 0 dBm, and +20 dBm (accuracy +/- 1 dB)	
Measurement range	from -90 dBm to +20 dBm	
Noise floor level (meas. dynamic range)	without amplifier: -80 dBm (12 kHz filter, Avg 16) with amplifier: -95 dBm (12 kHz filter, Avg 16)	
Display ranges	50 dB and 100 dB	
Amplitude linearity	$\pm 2 \text{ dB}$ at 23 °C	
Frequency response (flatness)	$\pm 1.5 \text{ dB}$ at 23 °C, for a level of -20 dBm	
Harmonic distortion	< -40 dBc, for a level of -20 dBm	
Non-harmonic distortion	< -70 dBc (< -60 dBc on identified lines)	
Input		
Acceptable overvoltage	+25 dBm permanent, ±30 VDC	
Impedance	Rated 50 Ω	
Input attenuation	Attenuator rated 20 dB, amplifier rated 20 dB	
Connector	BNC type	
Cursors		
Number of cursors	4 simultaneous cursors	
Cursor modes	1 to 10 automatic "Peak" detection markers, 1 cursor "attached" to the trace and 2 difference cursors	
Resolution	0.3 dB - 10 kHz / 0.1 dB - 10 kHz (AVG mode)	
Units	dBm or dBμV	
Functions		
Trace memories	Unlimited number on PC, with explicit names Storage and comparison of reference spans 100 to 5,000 points per sweep (depending on sweep speed)	
Configuration memories	Unlimited number on PC, with explicit names. Storage and recall of complete settings	
Functions on traces	Averaging (factors 2 to 64) / noise suppression and improvement of dynamic range Comparison to a reference and measurement of variations (frequency and amplitude) Screenshots with all settings - Transfer to Excel - Remote mode	
Demodulation	FM with built-in 0.2 W loudspeaker	
PC communication		
Interface	"Plug & Play" USB as standard	
Processing software	"Real Time" for control and analysis - 5 languages (FR, GB, GER, IT, SP)	

GENERAL SPECIFICATIONS

Mains power supply	230 VAC, ±10%, 50 / 60 Hz, approx. 7 W
Safety / standards	IEC 61010-1 - Cat. II / NF EN 61326-1:98
Dimensions / weight	270 (L) x 63 (H) x 215 (D) mm / 1.7 kg

TO ORDER

MTX1050-PC: 1 MTX 1050 analyser, 1 USB communication cable, 1 mains power cable, 1 CD-ROM containing the PC application software and Operating Manual, 1 HF antenna with BNC connection.

ACCESSORIES

HX0082: Near-field probe kit comprising 1 H-field proximity probe (30 MHz - 3 GHz), 1 H-field surface probe (30 MHz - 3 GHz), 1 SMB-BNC lead, 1 Operating Manual, 1 carrying case.



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