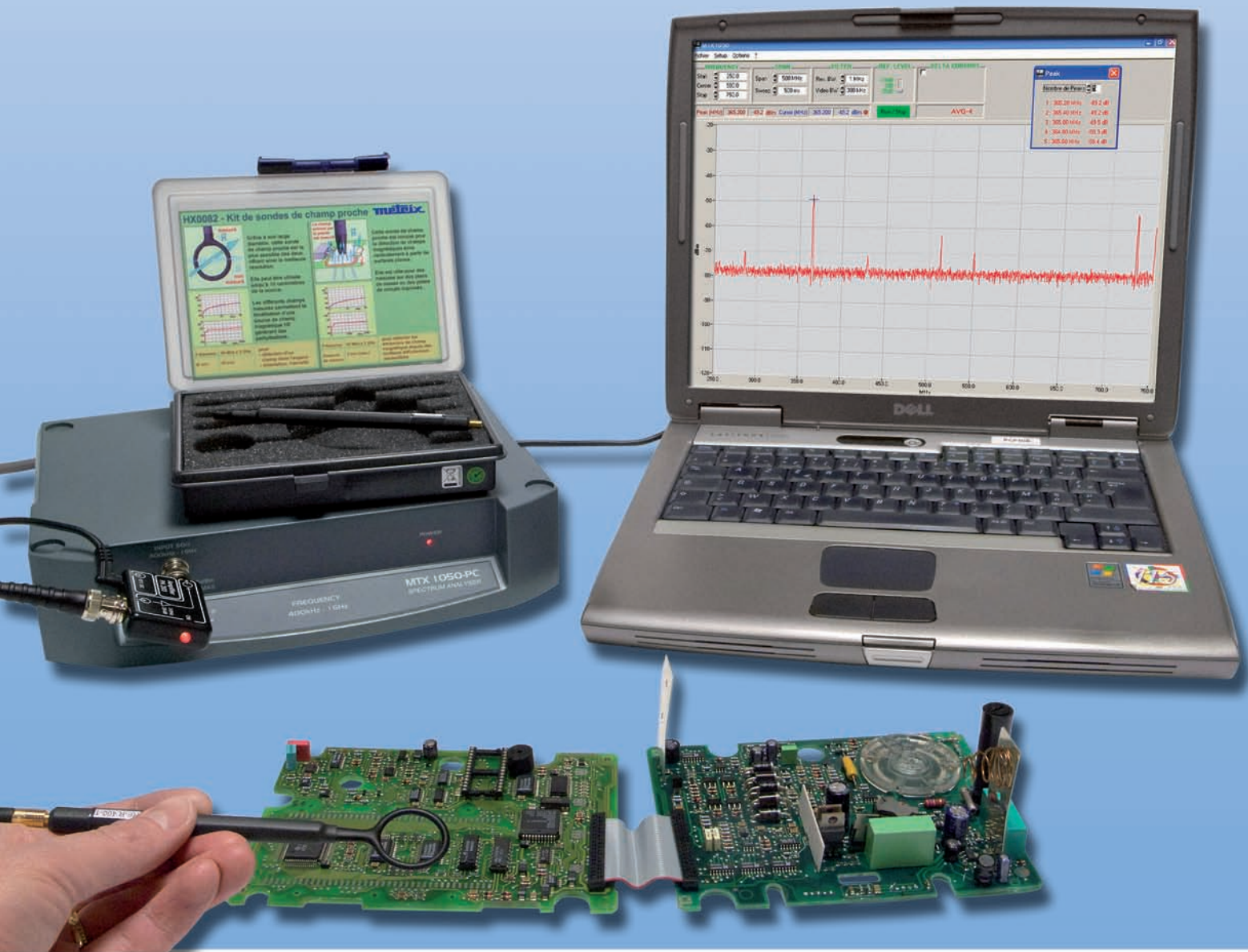


MTX 1050-PC HX0082 & HX0083 A special kit for EMC prequalification measurements

- 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

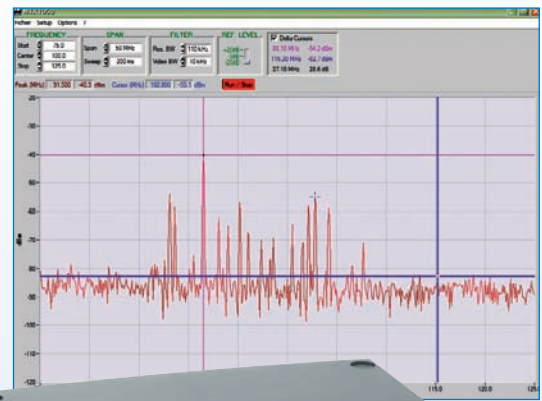


The **MTX 1050** spectrum analyser is hooked up directly to a PC by means of a "Plug & Play" USB connection and multilingual software. In this way, it benefits from the PC's **high-resolution colour display** and large screen, offering a horizontal resolution of up to 5,000 points.

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.



Near-field probes for quick, targeted measurements at low cost.

The various fields measured by these probes enable the sources of high-frequency electromagnetic fields causing disturbances to be located.

This means that users can make adjustments before the qualification of non-compliant electronic sub-assemblies.

The active H-field probes work by observing the disturbance currents. Insensitive to external disturbances, they measure the intensity of the field directly associated with the currents flowing in the conductors. They can be used without disconnecting the existing wiring.

The **HX0082** kit contains two H probes with a frequency range of 3 MHz to 3 GHz. The first is a proximity probe which can measure up to 10 cm away from the source. It detects all the electromagnetic fields present in the space. Due to its large diameter, this near-field probe is the more sensitive of the two, thus offering better resolution.

The second is a contact probe designed to detect magnetic fields emitted vertically from flat surfaces. It can be used for precise measurements on predefined areas (block plan, trace, screening, etc.).

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.

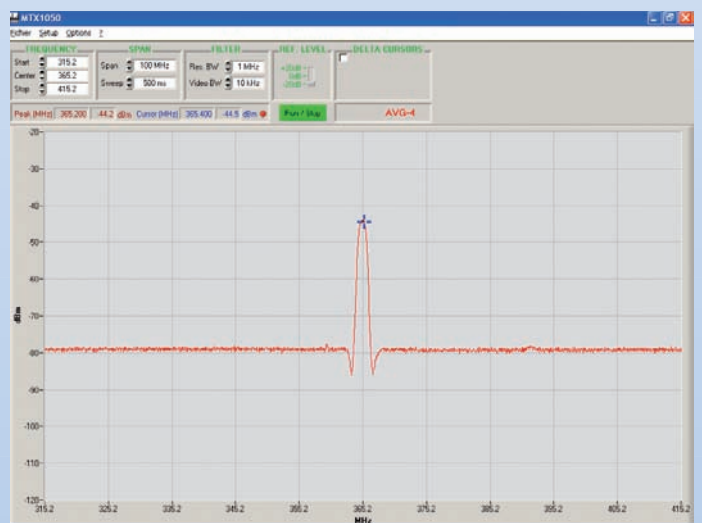
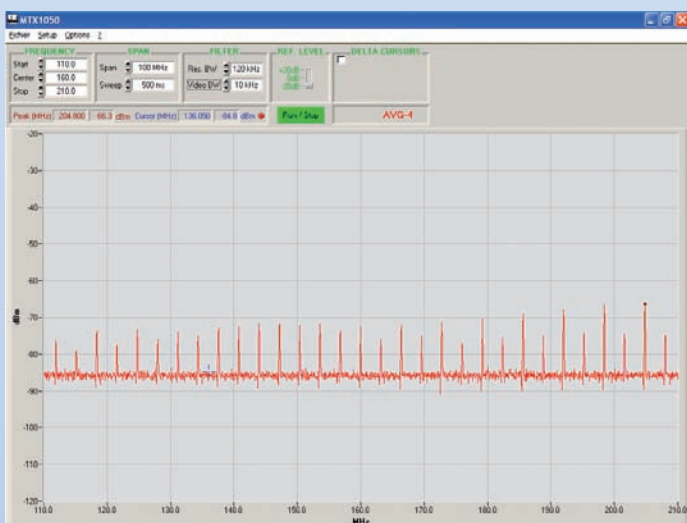


To be electromagnetically

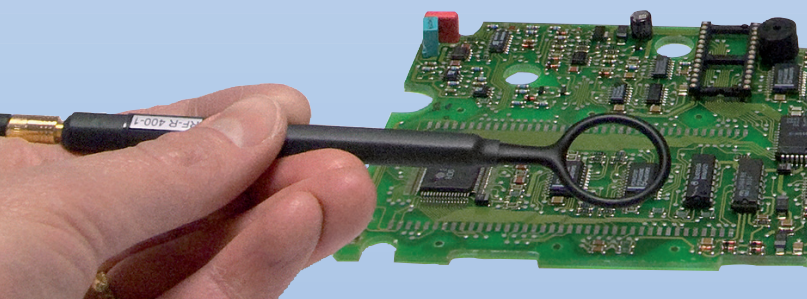
compatible, the electronic system must comply with the emission and immunity requirements, i.e.:

- **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 | ± 5 ppm / 1 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 | ± 2 dB at 23 °C | |
| Frequency response (flatness) | ± 1.5 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 dB μ V | |
| 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, $\pm 10\%$, 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.

HX0083: 1 x 20 dB / 3 GHz amplifier, 1 power cable, 1 Operating Manual, 1 carrying case



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