Compact Immunity Test System
CIT-10, 10kHz – 400MHz

Description
The CIT-10 is a complete test system for conducted RF-immunity tests according to IEC/EN 61000-4-6, ISO 11452-4, MIL-STD 461E/F CS114, SAE-J1113-2, DC 10614 and similar standards. Its internal RF-generator and RF-power amplifier produce output signals with max. up to 150 W within a frequency range from 100 (10) kHz up to 400 MHz. Generated signals are measured via one of the max. 3 internal RF-Voltmeters. Furthermore via an optional, internal directional coupler forward and reflected power can be measured. The whole test system allows full automatic tests for the specified frequency range. As a “stand-alone” test system the CIT-10 is convincing by its easy and comfortable handling and the excellent cost-performance ratio. Add-ons like coupling/decoupling devices are available as well.

Special Features:
- Conducted RF immunity tests acc. to IEC/EN 61000-4-6 and BCI tests acc. to ISO 11452-4 and MIL-STD 461E
- Signalgenerator, RF-power amplifier, RF-power meter and directional coupler (optional) in one 19”-case
- Stand-alone operation possible with optional available netbook
- Control-software included
- Most important parameters are shown on an integrated display
- Automatic EUT-monitoring
- Operation via USB port of a PC or Notebook
- Complete range of CDNs available

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## Technical specifications

### RF Voltmeter (external in-/output)

- **Frequency range**: 10 kHz to 400 MHz
- **Measuring range**: +30 dBm to -40 dBm
- **Accuracy**: ±0.5 dB
- **VSWR**: < 1.1 : 1
- **Input**: BNC, 50 Ω

### RF-Signal Generator

- **Output**: BNC, 50 Ω
- **Frequency range**: 10 kHz to 400 MHz
- **Frequency resolution**: 1 Hz
- **Output level range**: 0 to -60 dBm
- **Output level resolution**: 0.1 dB
- **Output level accuracy**: ±0.5 dB (± 1 dB max)
- **Accuracy (frequency)**: ±5 ppm (TCXO)
- **Harmonics**: < -30 dBc
- **Non harmonics**: < -45 dBc
- **Amplitude modulation (internal)**: 0 to 100 %, resolution 0.5 % (internal AF-Generator)
- **Amplitude modulation (external)**: BNC jack 1 Hz to 100 kHz, 0 to 100 %
- **Input impedance**: > 100 kΩ
- **Pulse modulation**: variable duty cycle 10 – 90 %; resolution 1 % (internal AF Generator)
- **VSWR**: < 1.5:1

### AF-Generator

- **Output jack**: BNC
- **Frequency range**: 1 Hz to 100 kHz
- **Frequency resolution**: 0.1 Hz
- **Output voltage**: 0 to 1 V amplitude; resolution 5 mV
- **Accuracy (frequency)**: ±50 ppm
- **Signal**: Sine wave / square wave / triangular

### Technical specifications

#### RF-Voltmeter (internal, 2 pcs.)

- **Frequency range**: 10 kHz to 400 MHz
- **Measuring range**: +53 dBm to -0 dBm
- **Accuracy**: ±0.5 dB

#### Directional coupler (optional)

- **Frequency range**: 10 kHz to 400 MHz
- **Power**: 200 W CW
- **Insertion loss**: 0.5 dB max
- **VSWR**: 1.25 : 1 max
- **Directivity**: 20 dB min

### EUT-Monitor input

- **Input voltage**: 0–10 V
- **Input impedance**: 100 kΩ

### Amplifier monitor

- **Output**: BNC, 50 Ω
- **Level**: - 40 dB (amplifier output), ±3 dB

### Interfaces

- **USB-A**: Multimeter (for EUT control)
- **USB-A**: Relay switching unit
- **USB-B**: Connection to computer

### General data

- **Temperature range**: 0 to 40 °C
- **Warm-up time**: 15 min.
- **Housing**: 19”-Subrack or desktop case
- **Dimension (W x H x D)**: 449 mm x 133 mm x 435.5 mm
- **AC input**: 100 - 240 VAC; 50/60 Hz
- **Volume of delivery**: CIT-10 / 75 (basic equipment), cabling, system software