

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

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 (basic equipment), cabling, system software

RF-Power Amplifier (TYPE)	CIT-10	CIT-10 / 75MIL	CIT-10 / 75
Frequency range	100kHz-250MHz	10kHz-250MHz	100kHz-400MHz
Output Power :			
Nominal	25W	75W	75W
Linear @ 1dB compression	20W	50W	50W
Gain	46dB nominal	51dB nominal	51dB nominal
Flatness	±1.5 dB maximum		
Input power for rated output	1 mW / 0 dBm		
Input / output impedance	50 Ω		
Input VSWR	1.5:1 max		
Harmonic distortion	<-20 dBc @ 20W	<-20 dBc @ 50W	<-20dBc @ 50W
Noise figure	typ. 5 dB	typ. 7 dB	typ. 7 dB