

SK4-97 Spectrum Analyzer

- ◆ **Synthesized LO with 0.1 Hz resolution**
- ◆ **Analyzing filter passband up to 3 Hz**
- ◆ **Dynamic range 90-100 dB**



DESCRIPTION

Designed for signal spectrum measurements, panoramic measurements of amplitude-frequency responses, phase-frequency characteristics, group delay of radio-electronic components and communications lines. Operates in an automatic measurement system or under a PC control.

The Instrument has a built-in tunable preselector and a synthesized tracking oscillator.

SPECIFICATIONS

FREQUENCY

Range: 10 kHz-130 MHz

Frequency span: 0-130

Bandwidth: 3.16 Hz-316 kHz in 1; 3.16; 10 sequence

Synthesized LO min tuning step: 0.1 Hz

Measurement accuracy: $\pm(1.5 \cdot 10^{-7} f + 0.1 \text{ Hz})$

AMPLITUDE

Scale: 10 divisions on CRT vertical axis (PC display)

Scales:

LIN

SQUARE

LOG (0.1-12 dB/div)

System noise in 3.16 Hz BW:

1 μ V	at frequencies up to 1 kHz
25 nV	at frequencies up to 500 kHz
13 nV	at frequencies up to 130 MHz

Measurement range: -145...+20 dBmW or 13 nV-2.2 V

Measurement accuracy: ± 0.3 – ± 1.5 dB in the main measurement field

Input impedance: 50 Ohm

DYNAMIC RANGE

Harmonic distortion: -90 dB

3d Order Intermodulation: -90 dB

Spurious including images: -90 dB

Line related: -80 dB

Phase noise at 50 kHz offset from carrier: -100 dB/Hz

TRACKING OSCILLATOR

Frequency range: 10 Hz – 130 MHz

Level: -65 to +10 dBmW

Tuning step: up to 0.3 dB

Harmonic distortion in relation to the 1st harmonic: -25 dB

Non-harmonic distortion: -40 dB

Output impedance: 50 Ohm

GENERAL

Relative humidity: 98% at 25 °C

Power: 220 \pm 22 V, 50 \pm 1 Hz; 22 \pm 11 V, 400 $^{+28}_{-12}$ Hz

Power consumption: 250 VA

Operating temperature range: 0...50 °C

Dimensions: 480x160x585 mm

Weight: 25 kg

ADDITIONAL INFORMATION

Measurements and panoramic display of amplitude-frequency responses in 10 Hz-130 MHz with amplitude resolution up to 0.1 dB and phase-frequency responses with phase resolution up to 0.1 °.

May be operated in an automatic measurement system composition over IEC 625 and RS 232 interface bus.

Active probe:

input impedance: 100 kOhm

input capacity: 3.5 pF

Internal crystal oscillator output:

10 MHz frequency with relative stability $\pm 1.5 \cdot 10^{-7} f$ under normal conditions
amplitude 0 dBmW at 50 Ohm load