

CH3-82 Microwave Frequency Counter

- ◆ **Super-wide frequency range**
10 Hz-37.5 GHz
- ◆ **High frequency measurement resolution**
- ◆ **Small-width radio pulse carrier frequency measurement**
- ◆ **Measurement result statistical processing and calculation of an average value and RMS deviation**
- ◆ **Fully automated measurements**
- ◆ **IEC 625 compatibility**
- ◆ **Severe operating conditions**



DESCRIPTION

The Instrument is designed to measure CW sine wave and pulse signals, pulse-modulated signal carrier frequency and pulse width.

May be used to control frequency parameters of CW and pulse modulated sources during their development, production and operation.

Operates as a self-contained instrument or in an automated measurement system.

SPECIFICATIONS

Measurement range:

- sine wave and pulse signal frequency:
10 Hz-100 MHz (A input);
CW frequency: 100-1600 MHz (B input),
1.5-37.5 GHz (C input);
- pulse modulated signal carrier frequency:
1.5-37.5 GHz (C input);
pulse width: 50 ns-100 ms (A input).

Pulse signal parameters:

- min pulse width: 0.15 μ s;
- pulse repetition rate: 100 Hz-1 MHz;
- on/off ratio: 10-1000

Input signal:

- 100 mV-10 V sine wave signal;
- 250 mV-10 V pulse signal (A input);
- 50 mV-0.5 V (B input);
- 50 μ W-5 mW (C input)

Input resistance:

- 50 Ohm; 1 MOhm, 50 pF (A input)
- 50 Ohm (B, C input)

Built-in reference oscillator frequency: 10 MHz

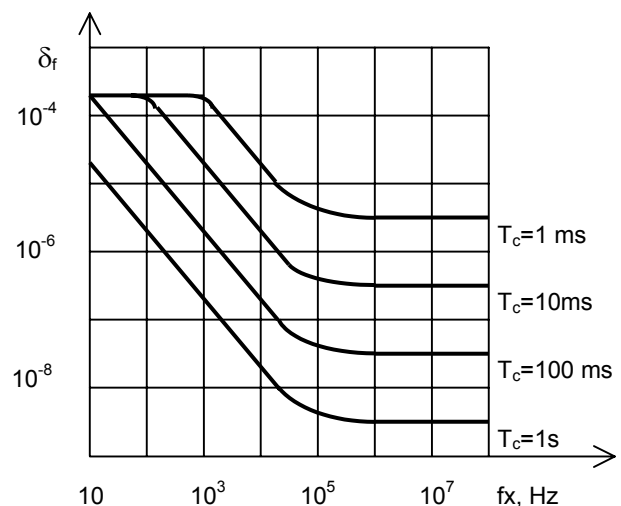
Relative error in accordance with built-in quartz crystal oscillator frequency, not more:

- $\pm 1 \cdot 10^{-9}$ /day
- $\pm 2 \cdot 10^{-7}$ /year

Frequency measurement resolution: $5 \cdot 10^{-9}/T_c$, T_c (count time) 1, 10, 100 ms; 1 s

Instrument error values are shown on graphs

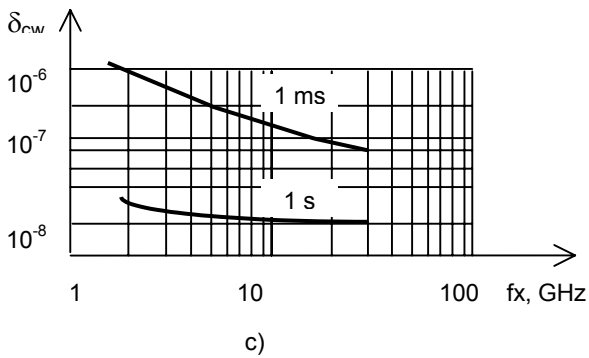
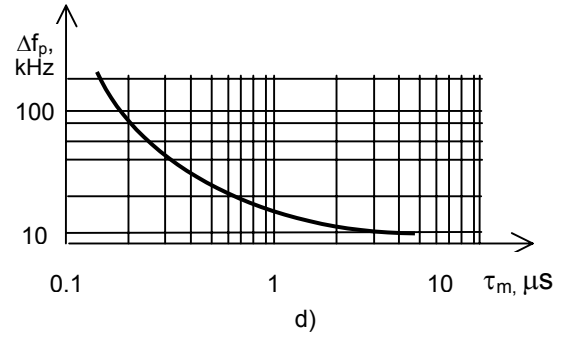
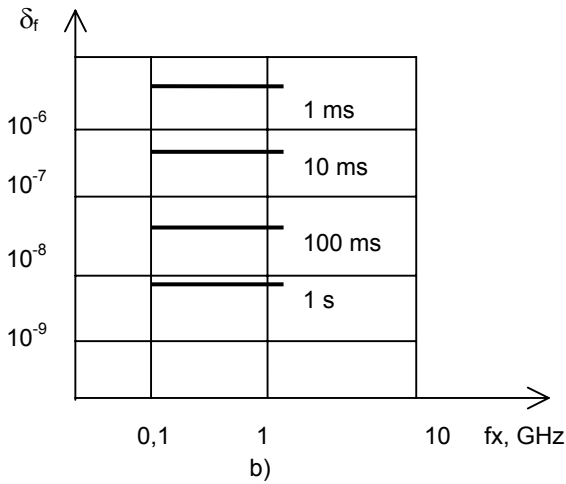
- a) δ_f - channel A (sine wave signal)
- b) δ_f - channel B
- c) δ_{CW} - channel C (CW signal)
- d) Δf_p - channel C (pulse signal)



a)

TIME AND FREQUENCY MEASUREMENT INSTRUMENTS

Electronic Frequency Counter, Time Interval Meter



GENERAL

Relative humidity at 25 °C: up to 98%

Power: 220 V, 50 Hz

Power consumption: not more than 120 VA

Operating temperature range: from -10...50 °C

Dimensions: 480x120x470 mm

Weight: not more than 16 kg

INSTITUTE OF ELECTRONIC MEASUREMENTS



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