

776/2.4G

Programmable Counter/Timer



- Measure frequency to 2.4GHz
- TCXO or external time base input
- 13 measurement functions
- IEEE-488 interface with SCPI or DDC commands

Ordering Information

776/2.4G

Programmable Counter/Timer with 2.4GHz and TCXO

776/2.4G/R

Programmable Counter/Timer with 2.4GHz and TCXO (Uses SCPI type commands). Inputs on rear.

This product is available with an Extended Warranty.

INPUT CHARACTERISTICS (CH. A & B)

RANGE: DC Coupled: 0 to 225MHz. AC Coupled: 1M Ω , 30Hz to 25MHz; 50 Ω , 1MHz to 225MHz.

SENSITIVITY: 25mV rms sine wave to 100MHz, 50mV rms sine wave to 225MHz, 75mVp-p at minimum pulse width of 5ns.

SIGNAL OPERATING RANGE: -5.00VDC to +5.00VDC (\times attenuator).

DYNAMIC RANGE: ($\times 1$) 75mV to 5Vp-p, to 100MHz; 150mV to 2.5Vp-p, to 225MHz.

IMPEDANCE: 1M Ω or 50 Ω , selectable.

LOW PASS FILTER: 100kHz nominal, switchable.

TRIGGER LEVEL RANGE:

Manual (auto trigger off): Continuously adjustable over $\pm 5.00V$ (\times attenuator), displayed in 10mV steps (\times attenuator).

Setting Accuracy: $\times 1$, $\pm (35mV + 2\%$ of reading); $\times 10$, $\pm (350mV + 2\%$ of reading).

AUTO TRIGGER:

DC Coupled: 100Hz to 150MHz.

AC Coupled: 1M Ω , 100Hz to 150MHz; 50 Ω , 1MHz to 150MHz (typically to 225MHz).

Auto Trigger Range: $\pm 280mV$ to $\pm 50Vp-p$.

Trigger Slope: Independent selection of \pm slope.

ATTENUATOR:

Manual: $\times 1$ or $\times 10$ nominal, selectable.

Auto: Attenuator is automatically enabled when in Auto Trigger Mode.

Auto Attenuator Sensitivity: Attenuator is switched when peak input signal exceeds 5.1Vp-p.

ACCESSORIES AVAILABLE

CABLES

7051-2	BNC Interconnect Cable, 0.6m (2 ft)
7051-5	BNC Interconnect Cable, 1.5m (5 ft)
7754-3	BNC to Alligator Cable, 0.9m (3 ft)

CONNECTOR

7755	50 Ω Feed-Through Terminator
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RACK MOUNT KITS

4288-5	Dual Fixed Rack Kit
7768	Single Fixed Rack Kit

The Model 776/2.4G Programmable Counter/Timer offers two independent input channels (A and B) for measuring frequencies up to 225MHz, plus a third input channel (C) that allows measuring frequencies up to 2.4GHz. The 776/2.4G also includes a temperature compensated crystal oscillator (TCXO) time base for exceptional measurement stability, even in changing ambient conditions.

Thirteen Measurement Functions

The 776/2.4G may be triggered manually (with a button on the front panel), automatically, or via an external input. Users can specify the display resolution from three to nine digits on any of thirteen measurement functions, including:

- Frequency — on channels A or B.
- Single-shot time measurements — period (the reciprocal of frequency), pulse width, time interval A to B (with 1 picosecond resolution).
- Averaged time measurements — period, pulse width, time interval A to B.
- Phase A to B — the phase angle (ϕ) between two signals with the same frequency on channels A and B.
- Totalize B — an event counter.
- Ratio A/B or Ratio C/B — ratio of the frequency of one channel vs. the frequency of another.
- V Peak A — measures the peak voltage that occurs on channel A.

CHANNEL C

2.4GHz C CHANNEL

RANGE: 50MHz to 2.4GHz (typically to 2.4GHz).

SENSITIVITY: 15mV to 2.4GHz.

VSWR: $< 2:1$ (typically 1.5:1).

DYNAMIC RANGE: 15mV rms to 4V rms.

DAMAGE LEVEL: AC, 5V rms; DC, $\pm 40V$

INPUT IMPEDANCE: 50 Ω , AC coupled.

RESOLUTION, ACCURACY: Same as Frequency A and B.

TCXO

FREQUENCY: 10MHz.

AGING RATE: $< 0.1ppm/month$, $< 1ppm/year$.

TEMPERATURE STABILITY: $< 1ppm$, 0° to $50^\circ C$.

EXTERNAL TIME BASE INPUT: Rear panel BNC accepts 5 or 10MHz TTL.

GENERAL

OPERATING TEMPERATURE: 0° to $50^\circ C$.

POWER REQUIREMENTS: 115/230VAC, 50-60Hz, 25W

DIMENSIONS: 89mm high \times 211mm wide \times 391mm deep (3.5 in \times 8.3 in \times 15.4 in).

RACK MOUNT DIMENSIONS: 89mm high \times 483mm wide (3.5 in \times 19 in).

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