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Data Sheet

August 14, 2026

ADVANTEST

Advantest TR5821 Universal counter, 1mHz to 120MHz

Advantest TR5821 Universal Counter 1 mHz to 120 MHz The Advantest TR5821 is a 120 MHz universal counter using reciprocal counting on InputBand direct counting on Input A. OEM TR5821/5822/5823 catalog lists 1 mHz to 50 MHz reciprocal, 10 Hz to 120 MHz direct, period 20 ns to 1000 s, time interval 200 ns to 1000 s, 25 mVrms sensitivity, and a 240 × 88 × 280 mm package under 3.5 kg and 40 VA. Laboratory and production frequency, period, time interval, ratio, and totalize measurements including burst and noisy relay signals with masking. The Advantest TR5821 is a 120 MHz universal counter using reciprocal counting on InputBand direct counting on Input A. OEM TR5821/5822/5823 catalog lists 1 mHz to 50 MHz reciprocal, 10 Hz to 120 MHz direct, period 20 ns to 1000 s, time interval 200 ns to 1000 s, 25 mVrms sensitivity, and a 240 × 88 × 280 mm package under 3.5 kg and 40 VA. Laboratory and production frequency, period, time interval, ratio, and totalize measurements including burst and noisy relay signals with masking. InputAFrequency Range: 10 Hz to 120 MHz direct counting



MODEL

Advantest TR5821

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

TR5821

LISTING

<https://aumictechlabs.com/products/tr5821-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Advantest TR5821 is a universal counter that delivers precise frequency measurements across 1 mHz to 120 MHz using dual-input architecture and adaptive measurement methods. INPUT A employs direct measurement (10 Hz to 120 MHz) while INPUT B uses reciprocal counting (1 mHz to 50 MHz) to optimize accuracy across the full range. Beyond frequency, the instrument measures period (20 ns to 1000 s), time interval (200 ns to 999.99999 s), frequency ratio, and totalization (DC to 50 MHz). Selectable gate times of 10 ms, 0.1 s, 1 s, and 10 s accommodate both rapid sampling and high-resolution measurements. The masking and autotrigger functions extend versatility across diverse signal characterization tasks. Time interval multipliers span 10^0 to 10^3 with 100 ns resolution and display in ns, ms, or s units. Compact dimensions (240 mm W × 88 mm H × 280 mm D) and 3.5 kg mass enable bench-top deployment. An optional TR1644 calculation unit integrates offline data processing capabilities.

Technical Specifications

Frequency Measurement INPUT A: 10 Hz to 120 MHz (direct method) INPUT B: 1 mHz to 50 MHz (reciprocal counting method) Gate times: 10 ms, 0.1 s, 1 s, 10 s Display units: Hz, kHz, MHz Accuracy: ± 1 count $\pm$ time base accuracy

Period Measurement Range: 20 ns to 1000 s Time Interval Measurement Range: 200 ns to 999.99999 s Multipliers: 10^0 , 10^1 , 10^2 , 10^3 Time unit: 100 ns resolution Display: ns, ms, s

Frequency Ratio & Totalization Range: DC to 50 MHz

Power & Environment Supply: 100–110 V, 108–132 V, 198–242 V, 216–250 V; 50 Hz to 400 Hz Consumption: ≤ 40 VA Operating temperature: 0°C to +40°C Operating humidity: $\leq 85\%$ RH

Key Features Masking function for signal gating Autotrigger function for autonomous measurement initiation Self-check capability Multiple input options for diverse signal sources

Typical Applications Component characterization and verification Signal source frequency validation Timing and period analysis in digital and analog circuits

Compatibility & Integration Optional TR1644 calculation unit for enhanced data processing

TR5821 Characteristics / Specifications

PARAMETER	VALUE
Model	TR5821
Mass	less than 3.5 kg
InputAFrequency Range	10 Hz to 120 MHz direct counting
InputBFrequency Range	1 mHz to 50 MHz reciprocal
Period Range Input B	20 ns to 1000 s
Time Interval RangeAto B	200 ns to 1000 s 100 ns time unit
Frequency Ratio Range	DC to 50 MHz
Totalize Range	DC to 50 MHz capacity 0 to 99999999
InputABSensitivity DC to 100 MHz	25 mVrms
InputABSensitivity 100 to 120 MHz	55 mVrms
Input Voltage Range X	25 mVrms to 500 mVrms
Input Impedance	approx 1 MOhm / 30 pF COMAapprox 500 kOhm
Destructive Input X1 DC to 100 kHz	100 Vrms
Destructive Input X1 100 kHz to 120 MHz	5 Vrms
Coupling	DC AC AUTO AC coupled
Pulse Resolution	10 ns
Trigger Level	approx plus or minus 1 V plus AUTO half peak
Masking Time	approx 0.1 ms to 0.1 s
Noise Rejection	100 kHz lowpass filter
Time Base Frequency	10 MHz
Aging Rate	plus or minus 5e-7 per month
Temperature Stability 0 to 40 C	plus or minus 5e-6
Time Base Output	10 MHz 1 to 2 Vp-p approx 500 ohm
External Time Base	10 MHz 1 to 2 Vp-p approx 500 ohm
Display	8 digit 7 segment green LED

PARAMETER	VALUE
Sampling Rate	50 ms or HOLD
Power Consumption	less than 40 VA
Dimensions	approx 240 W x 88 H x 280 D mm
Operating Temperature	0 to plus 40 C 85 percent RH max
Storage Temperature	minus 20 to plus 70 C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 20 to plus 70 C
Operating temperature	0 to plus 40 C 85 percent RH max
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Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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External Time Base	10 MHz 1 to 2 Vp-p approx 500 ohm
Display	8 digit 7 segment green LED
Sampling Rate	50 ms or HOLD
Power Consumption	less than 40 VA
Dimensions	approx 240 W x 88 H x 280 D mm
Operating Temperature	0 to plus 40 C 85 percent RH max
Storage Temperature	minus 20 to plus 70 C

Notes

From Advantest TR5821/5822/5823 Electronic Counters catalog specification pages. TR5821 is the base unit without built-in GPIB/BCD/DA; those interfaces are TR5822/5823 options.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.