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Data Sheet

August 12, 2026

ADVANTEST

Advantest R5373 Microwave frequency counter

Advantest R5373 Microwave Frequency Counter The Advantest R5373 is a microwave frequency counter covering 10 MHz to 27 GHz (R5372 sibling to 18 GHz) using reciprocal counting on low bands and digital TRAHER heterodyne conversion on microwave Input B for 1 Hz resolution in a 1 s gate. Includes calculation functions, digital comparator, pulse-modulated carrier measurement, and GPIB. Broadcast satellite and satcom frequency measurement; radio equipment pilot signals; magnetron / microwave-oven oscillator measurement (LINE sync); FM deviation (ΔF); IF-offset receiver frequency display; pulse-modulated carrier frequency. The Advantest R5373 is a microwave frequency counter covering 10 MHz to 27 GHz (R5372 sibling to 18 GHz) using reciprocal counting on low bands and digital TRAHER heterodyne conversion on microwave Input B for 1 Hz resolution in a 1 s gate. Includes calculation functions, digital comparator, pulse-modulated carrier measurement, and GPIB. Broadcast satellite and satcom frequency measurement; radio equipment pilot signals; magnetron / microwave-oven oscillator measurement (LINE sync); FM deviation (ΔF); IF-offset receiver frequency display; pulse-modulated carrier frequency.



MODEL

Advantest R5373

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

R5373

LISTING

<https://aumictechlabs.com/products/r5373-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Advantest R5373 is a dual-channel microwave frequency counter engineered for precision measurements to 27 GHz, with optional external mixer capability extending to 90 GHz. Built for

R&D, manufacturing, and quality assurance in RF and microwave environments, it delivers 1 Hz resolution in one second using the digital TRAHET technique. The instrument measures frequency, period, time interval, ratio, and pulse-modulated carrier frequency while supporting wide FM ranges and detailed signal characterization. Technical Specifications Frequency Range: Input A: 10 mHz to 550 MHz Input B: 500 MHz to 27 GHz Optional external mixers extend capability to 90 GHz Measurement Capabilities: Frequency, period, time interval, ratio, pulse-modulated carrier frequency (manual mode), totalizing Resolution: 1 Hz in 1 second for microwave frequencies; switchable decade steps from 0.1 Hz to 10 MHz; maximum 9-digit display (MSD 1–2) or 8-digit display (MSD 3–9) Accuracy: ± 1 count $\pm$ time base accuracy; trigger error $\pm 0.3\%$ for sine wave input ≥ 40 dB S/N Sensitivity: Channel 1: 25 mV Channel 2: 2.24 V (–35 dBm to +20 dBm) Input Impedance: Channel 1: ~ 1 M Ω /60 pF or 50 Ω Channel 2: ~ 50 Ω Input Attenuation: $\times 1$, $\times 20$ (0 dB, 20 dB) Maximum Input Voltage: 5 Vrms (6 Vrms for Input A); damage level 10 Vrms (400 Hz to 1 MHz) Time Base Stability: $\pm 5 \times 10^{-8}$ at $+25^\circ\text{C} \pm 25^\circ\text{C}$; aging rate $\pm 5 \times 10^{-9}$; external 10 MHz reference accepted FM Tolerance: ± 125 MHz or greater (≥ 1.4 GHz manual); ± 25 MHz (500 MHz to 1.4 GHz manual); 10 MHz peak-to-peak automatic Measurement Throughput: 0.05 s Pulse Measurements: Minimum pulse width 0.5 μs ; PRF 10 Hz to 5 MHz Key Features Two-channel architecture with independent input paths Trigger source selection: external or internal Calculation functions: digital comparator, max/min hold, deviation, standard deviation, averaging, PPM, offset/scaling displays AC (and DC for Input A) coupling GPIB 488-1 interface for remote control and data transfer Typical Applications Microwave component characterization, frequency stability analysis, modulated signal measurement, time interval determination, and automated production testing requiring high-resolution frequency data. Compatibility & Integration Standard GPIB 488-1 interface enables integration into automated test systems and benchtop measurement setups.

Features & description

From manufacturer datasheet

Features

- Frequency range: 10 mHz to 27 GHz (R5373); sibling R5372 to 18 GHz • Input A: 10 mHz–10 MHz reciprocal (DC/AC coupling bands) and 10 Hz–550 MHz direct counting class; BNC; $\sim 1\text{ M}\Omega/60\text{ pF}$ or 50 Ω paths per band table • Input B: 500 MHz to 27 GHz digital TRAHET + direct count; SMA (N adaptor); $\sim 50\text{ }\Omega$ • Resolution: down to 1 Hz at 1 s gate (microwave TRAHET); reciprocal A-band resolutions to 0.1 mHz class • Accuracy: ± 1 count $\pm$ time base accuracy ($\pm$ residual stability on TRAHET) • InputAsensitivity: 25 mVrms class; attenuator 0/20 dB • Pulse-modulated carrier (manual): A 100 MHz–550 MHz; B 500 MHz–27 GHz; pulse width $\geq 0.5\text{ }\mu\text{s}$; PRF 10 Hz–5 MHz • Allowable FM (manual): $\pm 125\text{ MHz}$ ($\geq 1.4\text{ GHz}$); $\pm 25\text{ MHz}$ (0.5–1.4 GHz); AUTO worst-case 10 MHz p-p • Functions: MAX/MIN hold, ΔF , AVG, σ , PPM, offset/scaling, comparator GO/NO-GO, totalize • Time base aging options: standard to Opt 23 (e.g. $2\times 10^{-8}/\text{day}$... $5\times 10^{-10}/\text{day}$ class) • Ext ref in: 1/2/2.5/5/10 MHz; time base out 10 MHz • GPIB standard; Option 01 BCD or Option 02 (mutually exclusive) • Power: 90 VA max; dimensions $\sim 255\times 132\times 420\text{ mm}$; mass $\leq 10\text{ kg}$ • Operating temperature: 0 to $+40^{\circ}\text{C}$; humidity $\leq 85\%\text{ RH}$

R5373 Characteristics / Specifications

PARAMETER	VALUE
Model	R5373
Manufacturer	Advantest
Instrument Type	Microwave Frequency Counter
Alias	R5373; Advantest R5373 Frequency Coverage
Overall	10 mHz to 27 GHz
InputA low band	10 mHz–10 MHz (reciprocal); mid: to 550 MHz
Input B	500 MHz to 27 GHz digital TRAHET + direct count; SMA (N adaptor); ~50 Ω
Accuracy	± 1 count $\pm$ time base accuracy ($\pm$ residual stability on TRAHET)
Sampling rate	50 ms to 5 s or HOLD
Display	12-digit green LED class General
Power consumption	≤ 90 VA
Dimensions	approx. 255 (W) $\times$ 132 (H) $\times$ 420 (D) mm
Mass	≤ 10 kg
GPIB	IEEE-488-1978 standard Notes Specs from Advantest R5372/R5373 microwave frequency counter datasheet. Confirm time-base option (21/22/23), connectors, and cal on the unit. Do not quote R5372's 18 GHz limit for R5373.
Frequency range	10 mHz to 27 GHz (R5373); sibling R5372 to 18 GHz
Input A	10 mHz–10 MHz reciprocal (DC/AC coupling bands) and 10 Hz–550 MHz direct counting class; BNC; ~1 M Ω /60 pF or 50 Ω paths per band table
Resolution	down to 1 Hz at 1 s gate (microwave TRAHET); reciprocal A-band resolutions to 0.1 mHz class
InputAsensitivity	25 mVrms class; attenuator 0/20 dB
Pulse-modulated carrier (manual)	A 100 MHz–550 MHz; B 500 MHz–27 GHz; pulse width ≥ 0.5 μ s; PRF 10 Hz–5 MHz
Allowable FM (manual)	± 125 MHz (≥ 1.4 GHz); ± 25 MHz (0.5–1.4 GHz); AUTO worst-case 10 MHz p-p

PARAMETER	VALUE
Functions	MAX/MIN hold, ΔF, AVG, σ, PPM, offset/scaling, comparator GO/NO-GO, totalize
Time base aging options	standard to Opt 23 (e.g. 2×10^{-8} /day ... 5×10^{-10} /day class)
Ext ref in	1/2/2.5/5/10 MHz; time base out 10 MHz
Power	90 VA max; dimensions ~255×132×420 mm; mass ≤10 kg
Operating temperature	0 to +40°C; humidity ≤85% RH
Humidity	≤85% RH

R5373 Specifications

PARAMETER	VALUE
Advantest R5373 Microwave Frequency Counter	Overview
Key Features	- Frequency range: 10 mHz to 27 GHz (R5373); sibling R5372 to 18 GHz
Technical Specifications	Model: R5373
Frequency Coverage	Overall: 10 mHz to 27 GHz
Measurement	Accuracy: ± 1 count $\pm$ time base accuracy
General	Power consumption: ≤ 90 VA

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to +40°C; humidity ≤85% RH
Operating Temperature	0 to +40°C; humidity ≤85% RH
Humidity	≤85% RH
Model	R5373
Manufacturer	Advantest
Instrument Type	Microwave Frequency Counter
Alias	R5373; Advantest R5373 Frequency Coverage
Overall	10 mHz to 27 GHz
InputA low band	10 mHz–10 MHz (reciprocal); mid: to 550 MHz
Input B	500 MHz–27 GHz (digital TRAHET) Measurement
Accuracy	±1 count ± time base accuracy
Sampling rate	50 ms to 5 s or HOLD
Display	12-digit green LED class General
Power consumption	≤90 VA
Dimensions	approx. 255 (W) × 132 (H) × 420 (D) mm
Mass	≤10 kg
GPIB	IEEE-488-1978 standard Notes Specs from Advantest R5372/R5373 microwave frequency counter datasheet. Confirm time-base option (21/22/23), connectors, and cal on the unit. Do not quote R5372's 18 GHz limit for R5373.

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	
Specifications	
PARAMETER	VALUE
Model	R5373
Manufacturer	Advantest
Instrument Type	Microwave Frequency Counter
Alias	R5373; Advantest R5373
Frequency Coverage	
Frequency Coverage	
PARAMETER	VALUE
Overall	10 mHz to 27 GHz
InputA low band	10 mHz-10 MHz (reciprocal); mid: to 550 MHz
Input B	500 MHz-27 GHz (digital TRAHET)
Measurement	
Specifications	
PARAMETER	VALUE
Accuracy	±1 count ± time base accuracy
Sampling rate	50 ms to 5 s or HOLD
Display	12-digit green LED class
General	
Specifications	
PARAMETER	VALUE
Power consumption	≤90 VA
Dimensions	approx. 255 (W) × 132 (H) × 420 (D) mm
Mass	≤10 kg
GPIB	IEEE-488-1978 standard
Notes	
Specs from Advantest R5372/R5373 microwave frequency counter datasheet. Confirm time-base option (21/22/23),	

connectors, and cal on the unit. Do not quote R5372's 18 GHz limit for R5373.

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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NIST-traceable calibration · SAM registered ·
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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.