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Data Sheet

August 13, 2026

ANRITSU

Anritsu MF1603A Frequency Counter, 0.1 MHz â€" 3 GHz

Anritsu MF1603A Frequency Counter to 3 GHz The Anritsu MF1603A is a benchtop frequency counter extending the MF160x family to 3 GHz on the high-frequency channel. Like the MF1602A, it provides dual-channel measurement of frequency, totalize, pulse width, and burst frequency with processing and mask functions for production and lab frequency evaluation of RF and digital circuits, with higher Channel 2 coverage than the 1 GHz MF1602A. The Anritsu MF1603A is a benchtop frequency counter extending the MF160x family to 3 GHz on the high-frequency channel. Like the MF1602A, it provides dual-channel measurement of frequency, totalize, pulse width, and burst frequency with processing and mask functions for production and lab frequency evaluation of RF and digital circuits, with higher Channel 2 coverage than the 1 GHz MF1602A.



MODEL

Anritsu MF1603A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

MF1603A

LISTING

<https://aumictechlabs.com/products/mf1603a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Anritsu MF1603A is a precision frequency counter engineered for measurements from 0.1 MHz to 3 GHz across telecommunications, electronics design, and RF testing environments. It delivers fast acquisition and 1 Hz measurement resolution through reciprocal and vernier

techniques, enabling 10-digit display in 1 second. The instrument measures frequency, period, pulse width, and totalizing functions with selectable gate times from 0.01 s to 10 s. Its 10 mVrms sensitivity and 50-ohm input impedance accommodate signals up to 5 Vrms maximum. Technical Specifications Frequency Range: 0.1 MHz to 3 GHz Measurement Functions: Frequency, period, pulse width, totalizing (up to 100 MHz) Period Measurement Range: 10 ns to 1000 s Pulse Width Resolution: 10 ns single-shot; 300 ps average measurement mode Sensitivity: 10 mVrms Input Impedance: 50 ohms Maximum Input Voltage: 5 Vrms Measurement Resolution: 1 Hz Gate Time: 0.01 s to 10 s (selectable: 0.01 s, 0.1 s, 1 s, 10 s, and additional ranges <0.4 ms to <20 s) Display: 11-digit seven-segment green LED Power Supply: 100–240 VAC, 50/60 Hz (or AC85–132 V / AC170–250 V) Key Features Signal Masking: SIG MASK enables period measurement through noise (5 μ s to 1600 s); GATE MASK delays measurement start by 1 μ s to 16 s Burst Signal Measurement: Dedicated capability for burst signal characterization ppm Display & Arithmetic: Results displayed in ppm, ratios, deviations, or derived units via sum, difference, product, and quotient operations Panel Preset Memory: Storage and recall of nine measurement configurations High-Resolution Acquisition: Reciprocal and vernier measurement techniques yield 10-digit resolution in 1 second Typical Applications RF system diagnostics and component testing Calibration procedures in production environments Frequency validation in telecommunications and electronics design Pulse characterization and burst signal analysis Compatibility & Integration Optional GP-IB Interface: Configures automated measurement and monitoring systems Reference Oscillator Options: Available with selectable aging specifications (e.g., 5×10^{-9} /day) Optional Pre-Amp: Available for enhanced signal sensitivity

Features & description

From manufacturer datasheet

Features

• Two channel frequency counter architecture • Channel 1 from millihertz class to 100 MHz class • Channel 2 high band to 3 GHz • Frequency, totalize, pulse width, and burst modes • Processing and mask functions • High speed acquisition for production test • Benchtop form factor • Digital frequency counter readout

Applications

• RF oscillator and VCO frequency adjustment to 3 GHz • Burst carrier frequency measurement • Pulse width and totalizing measurements • High speed production throughput testing • Mask based Go/No Go frequency checks

MF1603A Characteristics / Specifications

PARAMETER	VALUE
Model	MF1603A
Manufacturer	Anritsu
Instrument Type	Benchtop Frequency Counter
Alias	MF1603A; Anritsu MF1603A
Number of channels	2
Channel 1 minimum frequency class	0.1 mHz
Channel 1 maximum frequency class	100 MHz
Channel 1 sensitivity class	0.01 Vrms family
Channel 2 minimum frequency class	10 MHz
Channel 2 maximum frequency	3.0 GHz
Measurement functions	Frequency, Count totalization, Pulse width, Burst frequency
Processing function	yes
Mask function	yes
Totalizing	yes
Pulse width measurement	yes
Burst signal measurement	yes
High speed mode	yes
Measurement throughput class	80 ms class family
Time base stability class	0.05 /yr class family
Form factor	benchtop frequency counter
Primary frequency class	3 GHz maximum Channel 2
Channel architecture	dual channel Ch1/Ch2
Display class	digital frequency counter readout
Remote readiness	production throughput oriented
Warm up class	standard crystal time base warm up

PARAMETER	VALUE
Operating use	RF and digital frequency evaluation
Primary use	dual channel frequency counting to 3 GHz
Related lower band model	MF1602A to 1 GHz
Related series family	Anritsu MF series frequency counters
Input coupling class	AC coupled RF inputs typical
Impedance class	50 ohm RF path on high band channel typical
Resolution class	gate time dependent digital resolution
Trigger class	internal trigger for burst/pulse modes
Gate class	selectable gate for frequency averaging
Digits class	high resolution counter display family Notes Specs from Anritsu MF160x family listings with MF1603A as 3 GHz Channel 2 counterpart to MF1602A (1 GHz). Confirm exact Channel 1/2 limits, sensitivity, and options on the unit faceplate/operation manual.

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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Manufacturer	Anritsu
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Alias	MF1603A; Anritsu MF1603A
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Channel 1 minimum frequency class	0.1 mHz
Channel 1 maximum frequency class	100 MHz
Channel 1 sensitivity class	0.01 Vrms family
Channel 2 minimum frequency class	10 MHz
Channel 2 maximum frequency	3.0 GHz
Measurement functions	Frequency, Count totalization, Pulse width, Burst frequency
Processing function	yes
Mask function	yes
Totalizing	yes
Pulse width measurement	yes
Burst signal measurement	yes
High speed mode	yes
Measurement throughput class	80 ms class family
Time base stability class	0.05 /yr class family
Form factor	benchtop frequency counter
Primary frequency class	3 GHz maximum Channel 2
Channel architecture	dual channel Ch1/Ch2
Display class	digital frequency counter readout
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Related lower band model	MF1602A to 1 GHz
Related series family	Anritsu MF series frequency counters
Input coupling class	AC coupled RF inputs typical
Impedance class	50 ohm RF path on high band channel typical
Resolution class	gate time dependent digital resolution
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Notes
Specs from Anritsu MF160x family listings with MF1603A as 3 GHz Channel 2 counterpart to MF1602A (1 GHz).
Confirm exact Channel 1/2 limits, sensitivity, and options on the unit faceplate/operation manual.

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.