

3.5mm AUTOMATED TUNERS

4.0 TO 26.5 GHz

Features

- Optimized for C-Band, X-Band, Ku-Band, K-Band Noise and Power Applications
- Simultaneous High-Matching and Ultra-Low Vibration for On-Wafer Applications
- Ideal for Broad-Band Noise parameter Extraction and Noise and Large-Signal Nonlinear Model Verification
- DLL Environment for Automated Applications

Applications and Benefits Overview

The MT983A01 automated tuners are optimized for a broad class of in-fixture and on-wafer applications requiring flexibility, broad frequency coverage and ease of use. Based on Maury's proven non-contacting probe technology, these high-performance tuners evolve beyond outdated contacting probe technology to deliver high VSWR with superb accuracy and reliability. An integral component of Maury's Device Characterization Solutions, these PC-based automated tuners are controlled using Maury's family of Device Characterization Software tools including the Maury ATS version 5 (or later) interactive environment and the DLL-based measurement automation environment. The ATS interactive environment is an integrated device characterization environment providing comprehensive calibration and device characterization tools for power and noise optimization. The DLL environment enables direct interface with common programming tools such as Agilent VEE™, NI Labview™, MS Visual Basic & C/C++, and Mathworks MATLAB™. With a tuning resolution in excess of a million impedance points and accuracy better



MT983A01
3.5mm Automated Tuner

than -40 dB over the entire Smith Chart, maury automated tuners give you the device characterization answers you need with the accuracy necessary to make engineering decisions with confidence. Typical applications include load-pull for CW and pulsed or modulated C-band, X-band, Ku-band, K-band design.

Controller

For optimum performance, the MT1020CATS Controller is designed to provide a USB interface to non-USB tuners and can be used to control up to two (2) tuners simultaneously. Alternatively, the legacy MT986 GPIB-programmable ATS controller may also be used.

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Specifications

Frequency Range See [Available Models Table](#)
 VSWR Matching Range ... See [Available Models Table](#)
 Step Size (Probes) 62.5 microinches¹
 Step Size (Carriage) 355 microinches¹
 Connectors NMD3.5mm male²

Accessories Provided

One (1) each MT982C12 tuner control cable and one (1) operating manual.

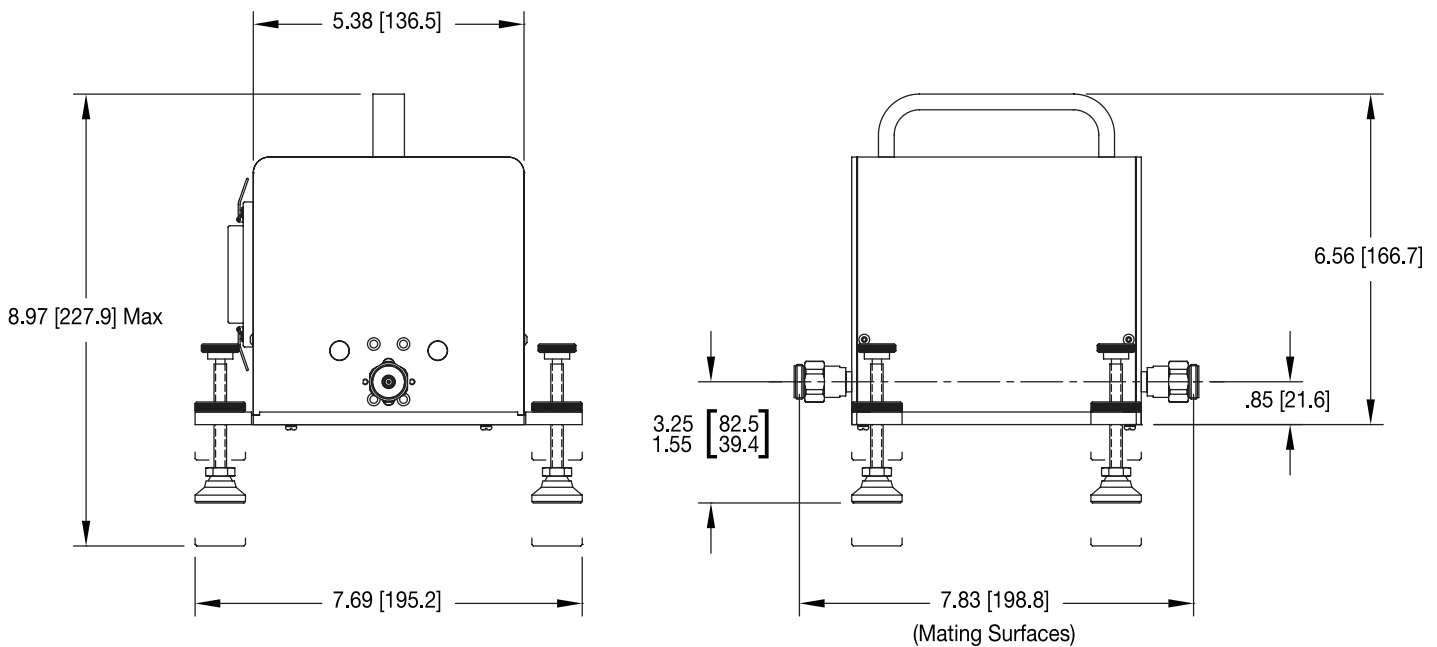
Recommended Accessories

MT1020C USB controller power hub
 2698F1 3/4-in. hex torque wrench
 A050A 3.5mm connector gage kit
 MT900 Probe station integration

Available Models

Model	Frequency Range (GHz)	Matching Range		Power Capability ⁴	Vector Repeatability (Minimum)	ΔGt (Typical)	VSWR ⁵ (Maximum)	Insertion Loss ⁵ (Maximum)	Dimensions
		Minimum	Typical ³						
MT983A01	4.0 — 26.5	10:1	15:1	10 W CW 100 W PEP	-40 dB	± 0.2 dB	1.10:1	0.6 dB	7.7" x 7.8" x 9.0" (19.5cm x 19.9cm x 22.8cm)

Dimensions – Inches and (mm)



¹ Based on 1/2 stepping the drive motors.
² NMD3.5mm male per Maury data sheet 5E-084.
³ Defined as the maximum VSWR within 20% of the peak VSWR.

⁴ Power rated at maximum VSWR.
⁵ With probes fully retracted.