

3.5mm AUTOMATED TUNERS

2.0 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*
- *USB Interface for Simple, Fast, and Reliable Control*
- *Ideal for Broad-Band Noise parameter Extraction and Noise and Large-Signal Model Verification*
- *DLL Environment for Automated Applications*

Applications and Benefits Overview

The MT983BU01 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 Based on Maury's proven non-contacting probe technology, these high-performance tuners evolve beyond outdated contacting probe technology to deliver high VSWR with superb accuracy and reliability.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 Device Characterization Solutions, these USB-interfaced automated tuners are controlled using one of three Maury Software Solutions; Maury's MT930 series IVCAD Advanced Measurement and Modeling Software; Maury's Device Characterization Software suite (ATS version 5 or later); or Maury's DLL environment.

The MT930 IVCAD software suite is the most advanced measurement and modeling software in the industry, with support for multiple load pull techniques including traditional load pull using external instrumentation, VNA-based load pull, active load pull and hybrid load pull.

The ATS software is an integrated device characterization suite providing front-end and back-end device

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MT983BU01
3.5mm Automated Tuner

characterization tools for power and noise characterization.

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 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 MT1020B ATS Power Distribution Hub can be used to control up to four (4) MT983 series tuners. Additionally, the MT1020D Desktop Switching Power Supply can be used to provide power to a single MT983 series tuner.



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: One (ea.) 3.5mm male² & female²

Accessories Provided

One (1) MT1020D controller, one (1) USB cable and one (1) operating manual.

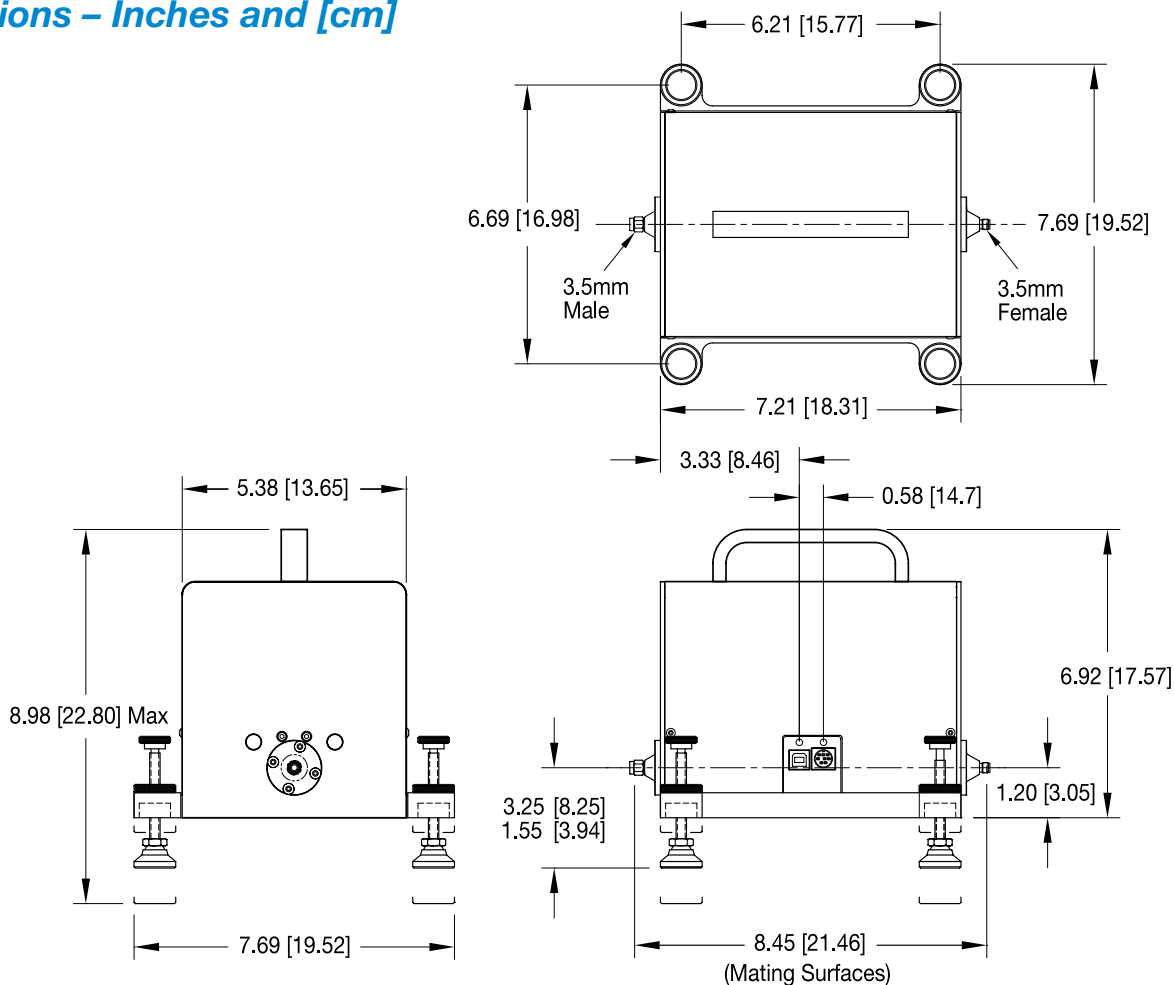
Recommended Accessories

8799A1 3.5mm (0.312 in. hex) torque wrench
 A034E 2.92mm/3.5mm digital connector gage kit

Available Models

Model	Frequency Range (GHz)	Matching Range		Power Capability ⁴	Vector Repeatability (Minimum)	Insertion Loss ⁵ (Maximum)	Dimensions
		Minimum	Typical ³				
MT983BU01	2.0 – 26.5	10:1	15:1	25W CW 250 W PEP	-40 dB	0.6 dB	7.69" x 8.45" x 8.98" (19.5 cm x 21.5 cm x 22.8 cm)

Dimensions – Inches and [cm]



¹ Based on 1/2 stepping the drive motors.
² Precision 3.5mm per Maury data sheet 5E-062.
³ Defined as the minimum VSWR within 70% of the frequency range.

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