

# Automated Sliding Shorts

DATA SHEET / 4T-076



# Automated Sliding Shorts

0.4 TO 18.0 GHZ

*MT999A  
7mm Automated  
Sliding Short*

*MT999D  
7mm Automated  
Sliding Short*

*MT999B  
7mm Automated  
Sliding Short*



## Features

- > Optimized for Low-Cost Harmonic Load Pull Measurement
- > 50:1 Minimum Matching Range
- > DLL Environment for Automated Applications

## Applications and Benefits Overview

The MT999 series automated sliding shorts are optimized for use with Maury MT981/MT982 series tuners in applications where harmonic load pull or tuning measurements with a high mismatch is required. When used with the appropriate triplexer or diplexer, the MT999A/B/D sliding shorts provide the capability to make the most accurate and reliable harmonic measurements possible.

These easy-to-use, high-performance shorts deliver a very high mismatch with superb accuracy and reliability over a broad frequency range 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 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™.

## Controller

For optimum performance, the MT1020C ATS Controller is designed to provide a USB interface to non-USB sliding shorts and can be used to control up to two (2) shorts simultaneously. Alternatively, the legacy MT986 GPIB-programmable ATS controller may also be used.

## Specifications

Frequency Range -- See Available Models Table  
 VSWR Matching Range -- See Available Models Table  
 Step Size (Carriage)<sup>1</sup> -- See Available Models Table  
 Connectors: -- Precision 7mm<sup>2</sup>

## Accessories Provided

One (1) operating manual.

## Recommended Accessories

MT1020C -- USB controller power hub  
 2698C2 -- 3/4-in. hex torque wrench  
 A028D -- 7mm connector gage kit  
 MT999C11 -- Single 1m Cable  
 MT999C12 -- Single 2m Cable  
 MT999C13 -- Dual 1m Cable

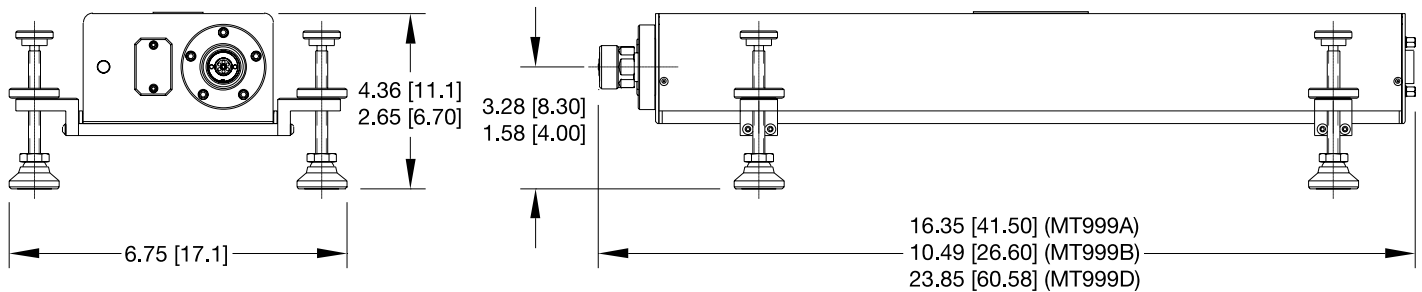
## Available Models

| Model  | Frequency Range (GHz) | Matching Range |         | Power Capability     | Vector Repeatability (Minimum) | Step Size (Microinches) <sup>1</sup> | Phase Change Per Step |
|--------|-----------------------|----------------|---------|----------------------|--------------------------------|--------------------------------------|-----------------------|
|        |                       | Minimum        | Typical |                      |                                |                                      |                       |
| MT999A | 0.8 – 7.5             | 50:1           | 65:1    | 10 W CW<br>100 W PEP | -40 dB                         | 625                                  | 0.29° @ 7.5 GHz       |
| MT999B | 3.0 – 18.0            |                |         |                      |                                | 207.5                                | 0.23° @ 18 GHz        |
| MT999D | 0.4 – 4.0             |                |         |                      | -35 dB                         | 625                                  | 0.15° @ 4 GHz         |

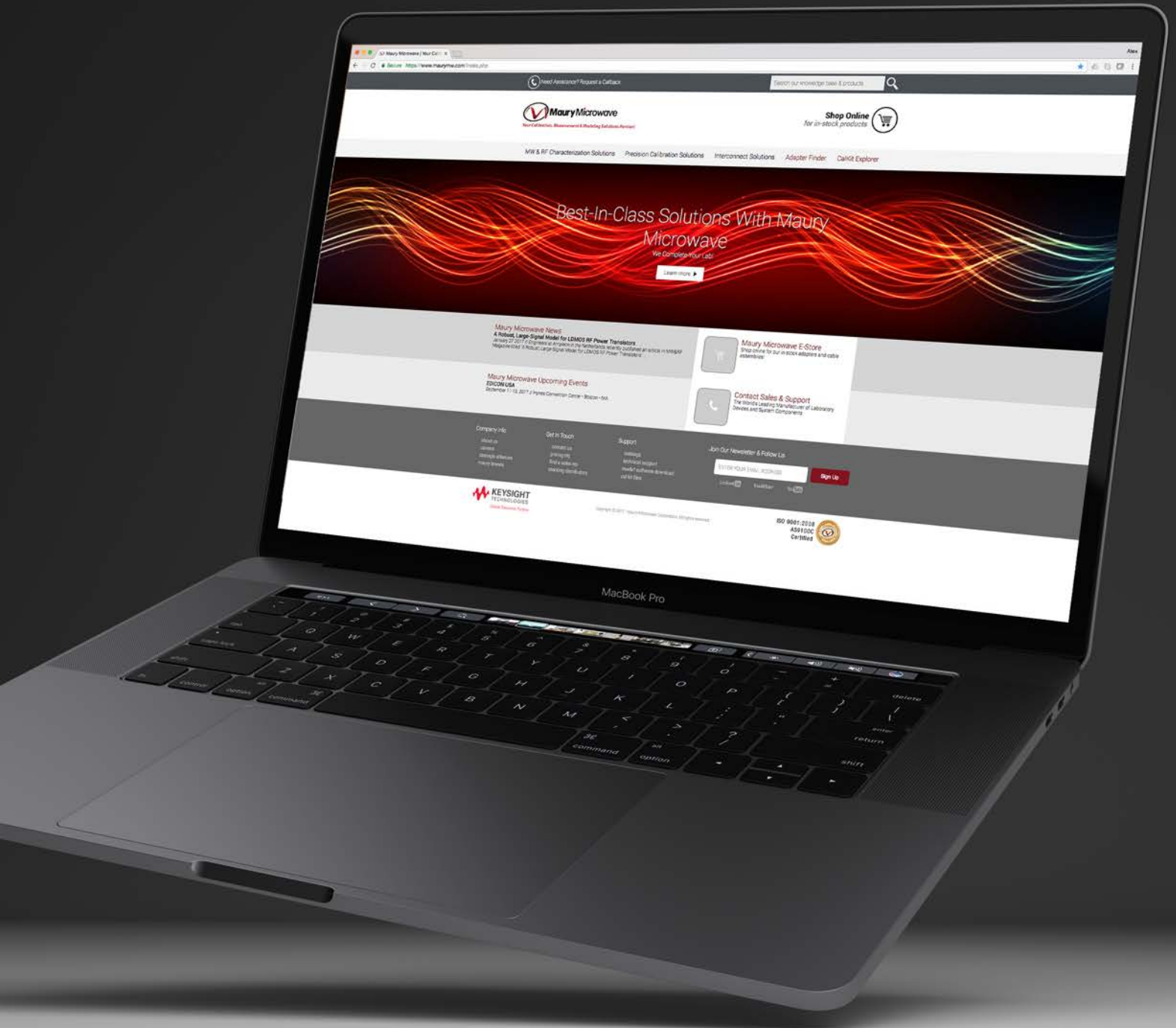
<sup>1</sup> Based on 1/2-stepping the drive motors.

<sup>2</sup> Precision 7mm per Maury data sheet 5E-060.

## Dimensions – Inches



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