



## RF Characterization Report

MH081-MH1RP-MH1RP  
MH081-MH3RP-MH3RP



**Description:**  
**MH081, Micro RF Cable Assembly,**  
**0.81mm Cable Diameter**

**Series:** MH081, RF Cable Assembly, 50 Ohm,

**Description:** End 1: MH3 or MH1 RA Plug, End 2: MH3 or MH1 RA Plug, 0.81mm Coax Cable

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**Series:** MH081, RF Cable Assembly, 50 Ohm,  
**Description:** End 1: MH3 or MH1 RA Plug, End 2: MH3 or MH1 RA Plug, 0.81mm Coax Cable

**Test Setup Information**

**Scope:**

To perform characterization tests, Insertion Loss, Return Loss and Voltage Standing Wave Ratio.

**Product Description:**

Part Number	Length	Qty	Termination – End 1	Termination – End 2
MH081-MH1RP-MH1RP	305mm	5	MH1, Right Angle Plug	MH1, Right Angle Plug
 <p>0.81mm Dia.</p>				
MH081-MH3RP-MH3RP	305mm	5	MH3, Right Angle Plug	MH3, Right Angle Plug
 <p>0.81mm Dia.</p>				

**Test Calibration:**

Calibration is performed using the 50Ω Agilent mechanical calibration kit, PN 85052D. Yellow line depicted in picture below represents the approximate calibrated reference plane at Ports 1 and 2. Residual effects from any uncalibrated adapter interface are inclusive to all measurements.



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### **Adapter Use:**

Each port uses at least one adapter capable of mating to the assembly under test. Any supplementary adapter will contribute additional electrical characteristics to the measured data. Any use of additional adapters is noted.

SMA (m) to MH1 (f), QTY. 2, Supplier: DynaHz, Range: 0-6 GHz

SMA (m) to MH3 (f), QTY. 2, Supplier: DynaHz, Range: 0-6 GHz

### **Definition of Assembly under Test:**

The performance characteristics include the interface with adapters.

### **Port Designations:**

The connector attached to port 1 of the VNA is "End 1" from the part number callout. Insertion Loss is incident power transmission  $S_{21}$ . Return Loss / VSWR is incident reflected power  $S_{11}$ .

### **Legend for Plots:**

Ten samples are tested. Group 1, MH081-MH1RP-MH1RP-0305 features the MH1 micro connector. Group 2, MH081-MH3RP-MH3RP-0305 features the MH3 micro connector. MH3 is the smaller of the two micro coaxial connectors. Each of the 0.81mm micro coax samples is 305 mm in length. Graphical representations include the worst and best case responses of Insertion Loss, Return Loss and Standing Wave Ratio. For group one, sample two is the best case response and sample five is the worst case response. For group two, sample five is the best case response and sample two is the worst case response. Waveform representations of samples 01, 03, & 04 for each group are available but not included in this report.

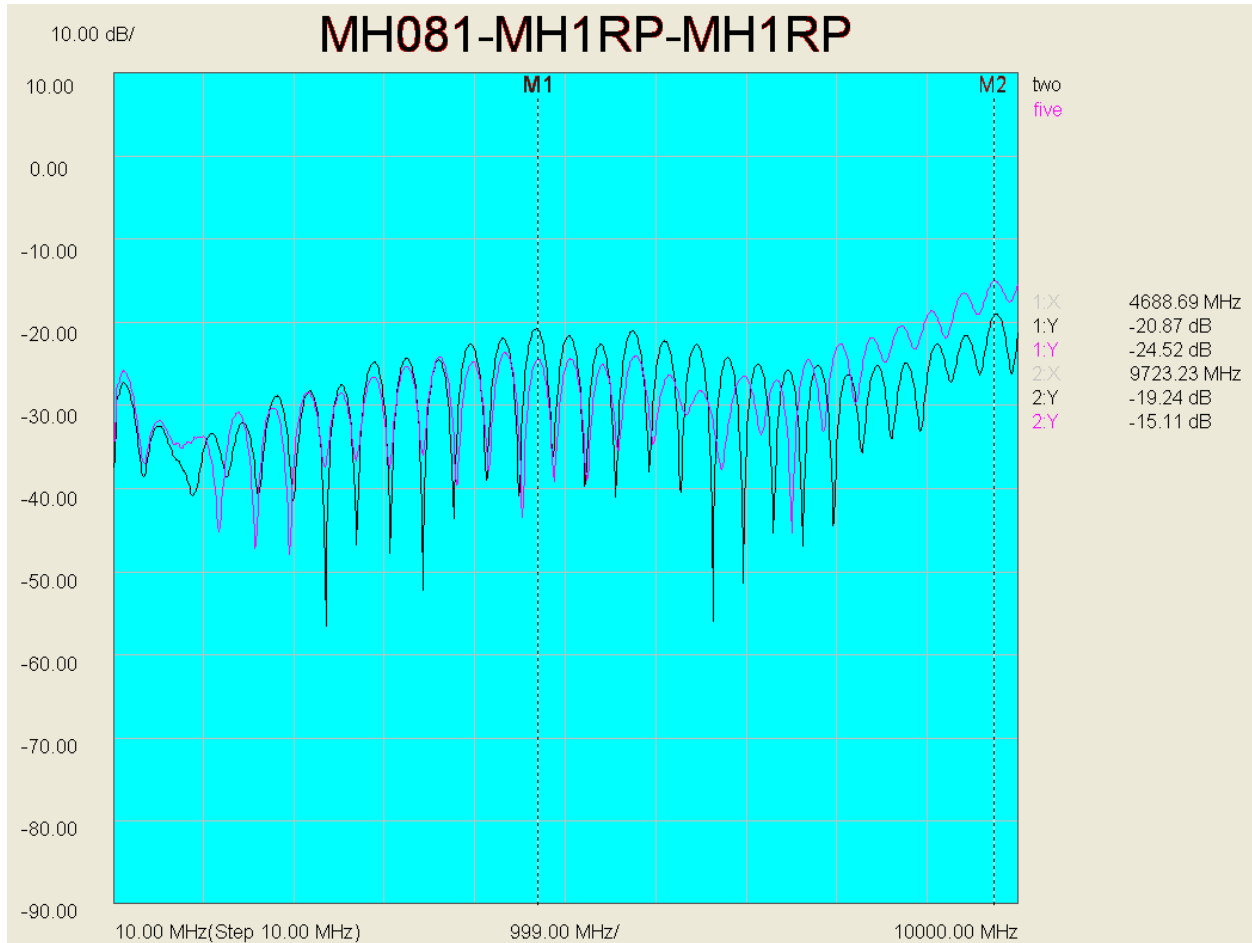


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### MH081-MH1RP-MH1RP Results

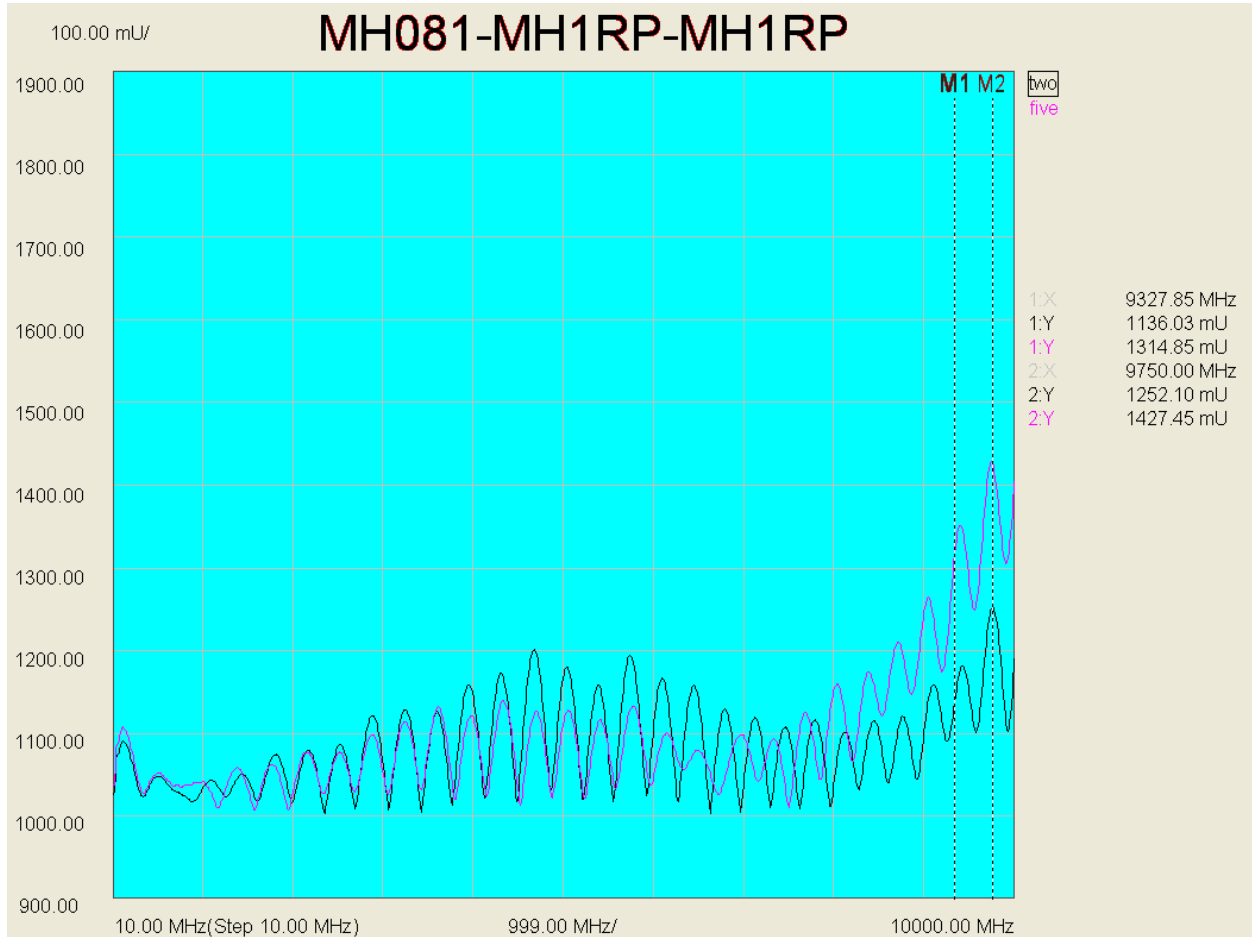
#### Return Loss



**Series:** MH081, RF Cable Assembly, 50 Ohm,

**Description:** End 1: MH3 or MH1 RA Plug, End 2: MH3 or MH1 RA Plug, 0.81mm Coax Cable

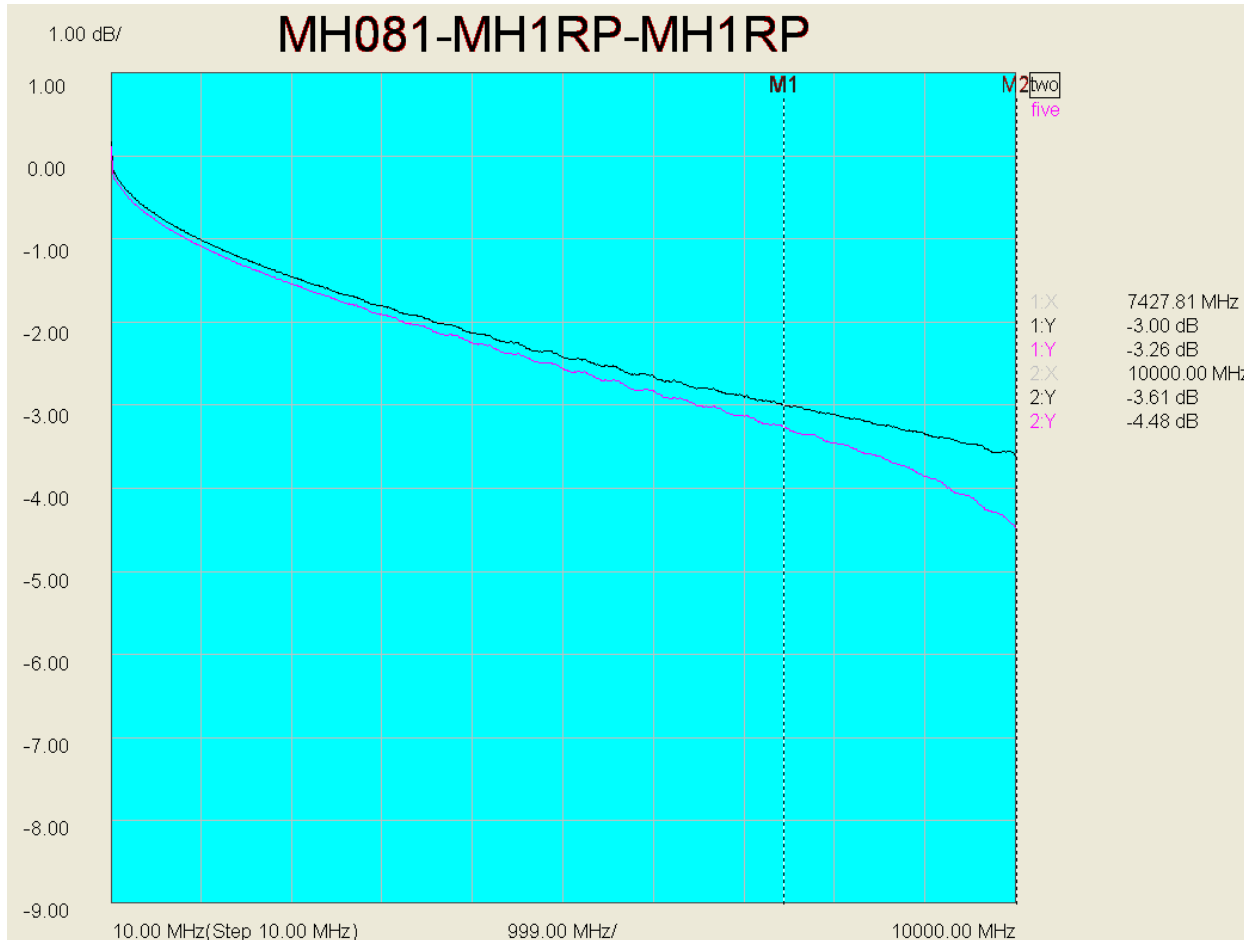
## SWR



**Series:** MH081, RF Cable Assembly, 50 Ohm,

**Description:** End 1: MH3 or MH1 RA Plug, End 2: MH3 or MH1 RA Plug, 0.81mm Coax Cable

Insertion Loss

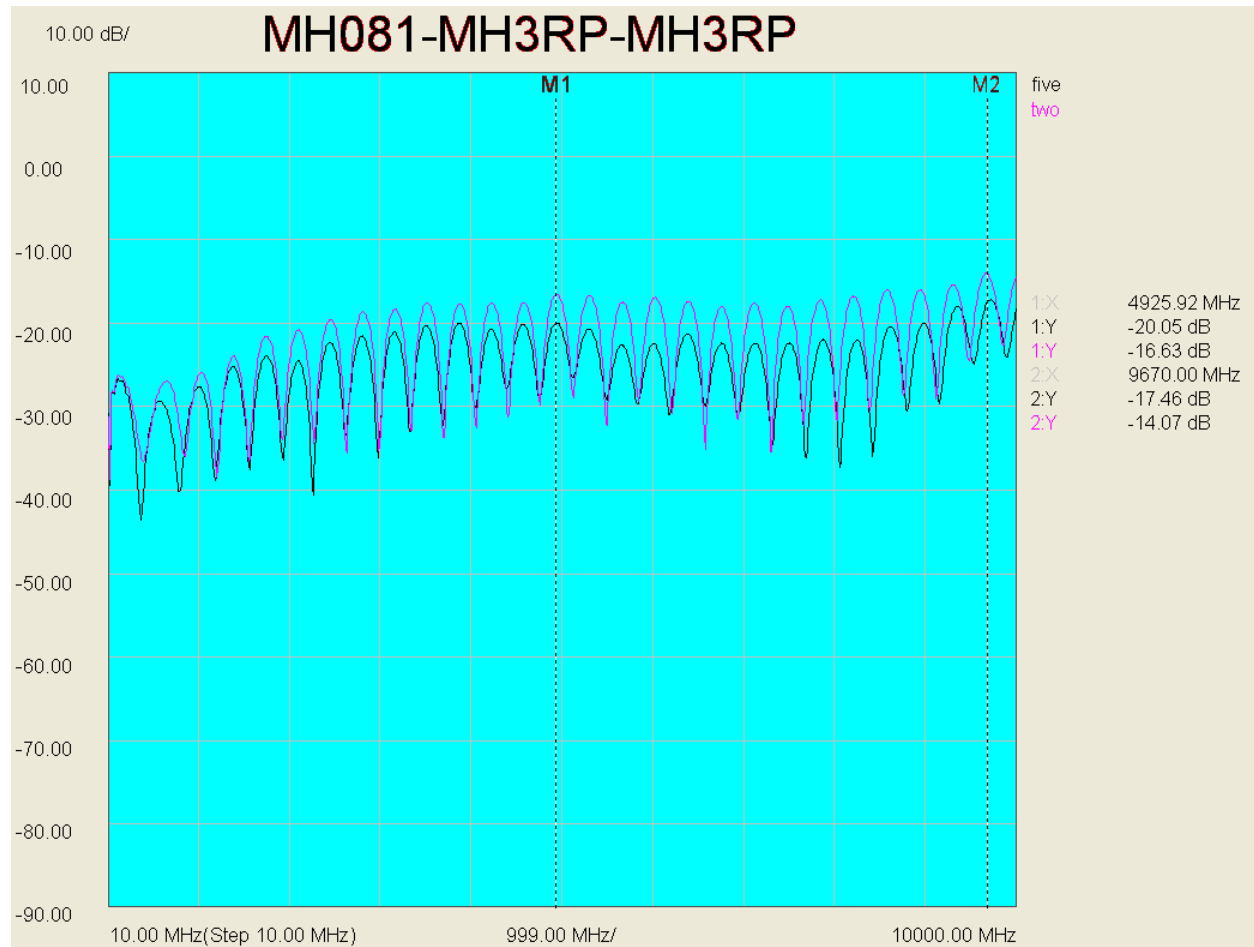


**Series:** MH081, RF Cable Assembly, 50 Ohm,

**Description:** End 1: MH3 or MH1 RA Plug, End 2: MH3 or MH1 RA Plug, 0.81mm Coax Cable

## MH081-MH3RP-MH3RP Results

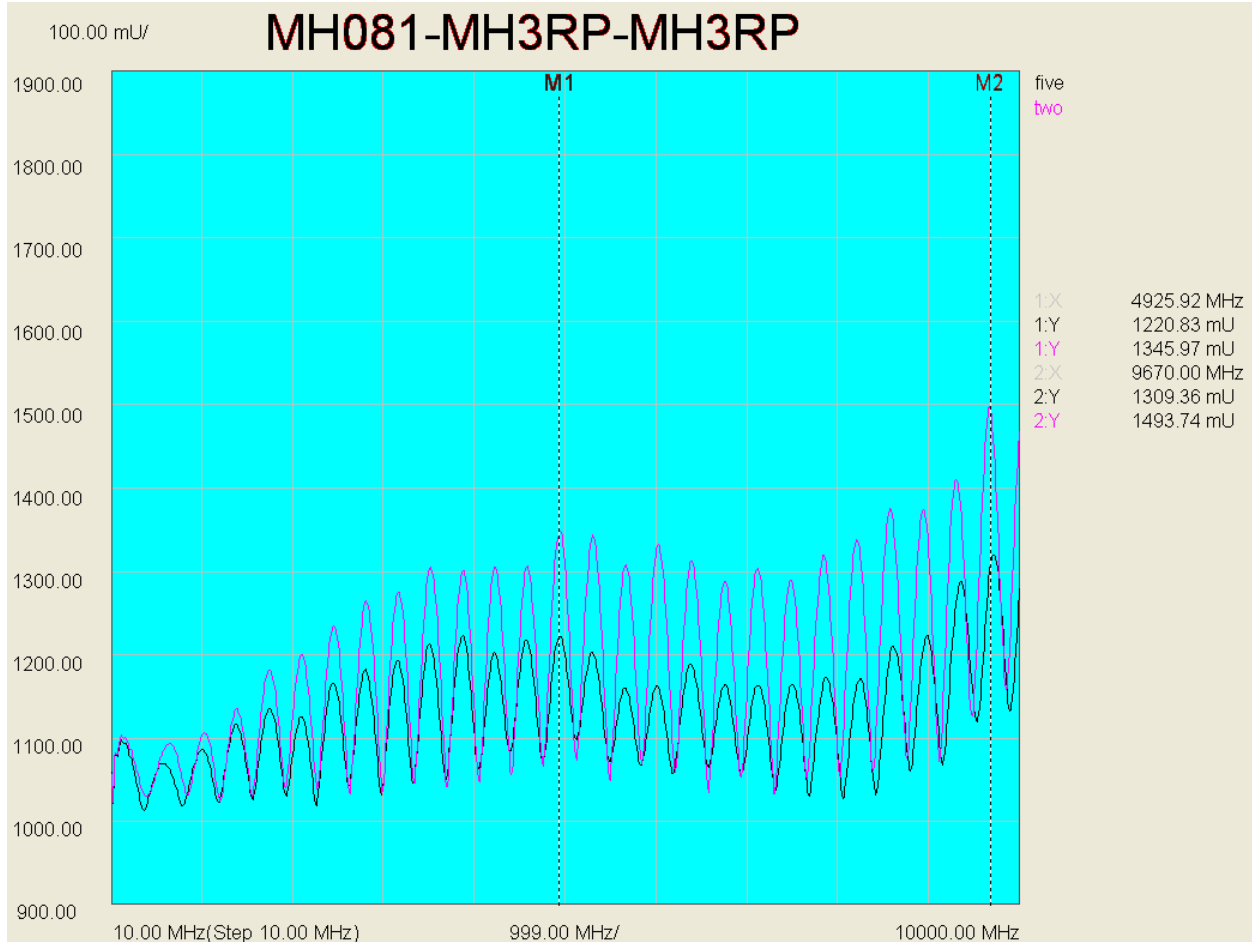
### Return Loss



**Series:** MH081, RF Cable Assembly, 50 Ohm,

**Description:** End 1: MH3 or MH1 RA Plug, End 2: MH3 or MH1 RA Plug, 0.81mm Coax Cable

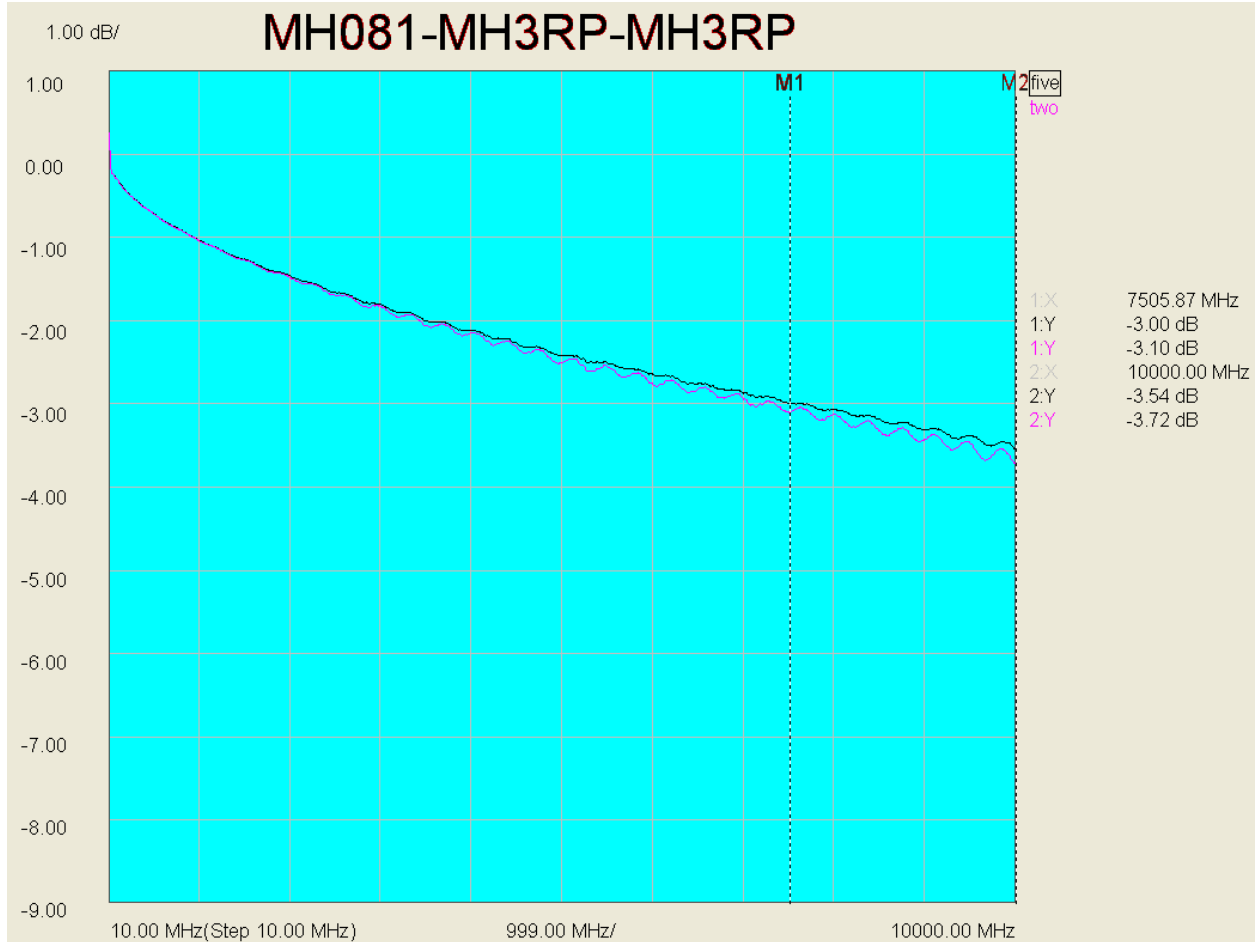
## SWR



**Series:** MH081, RF Cable Assembly, 50 Ohm,

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## Insertion Loss



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### Instrument Setup:

Network Analyzer	Agilent E8364B PNA/N4421B Series (10 MHz -50GHz) Default 2-Port Configuration
Mechanical Calibration Kit	85052D
Averaging Factor	0
Smoothing	Off
IF Bandwidth	1 KHz
Sweep Start	10 MHz
Sweep End	26.5 GHz
Points	2000
Calibration File	4P_10m-26.5g_3.5f-pna1_3.5f-ts2_sma-pna2_sma-ts4
Test Cables	Gore 0Z0CJ0CK0360

### Test Environment:



(A Typical set-up, actual part not depicted.)