

7mm Two-Port Mismatch Air Line Standard Set

Model 2654A

Features

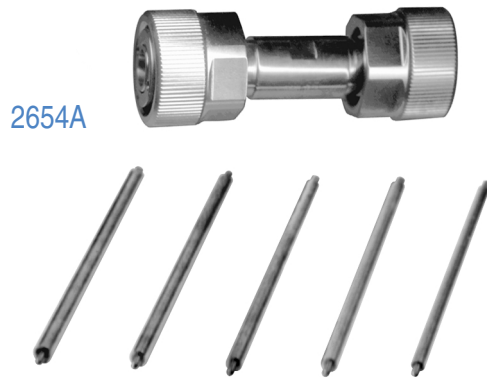
- ▶ DC to 18.0 GHz
- ▶ Beadless LPC7 Connectors

Description

The 2654A Beadless Mismatch Air Line Set was designed for use in coaxial systems employing 7mm connectors. The air line connectors are beadless LPC7 connectors that mate with standard 7mm connectors, and rely on the mating connector for center conductor support.

Each set consists of:

- A) One (1) outer conductor.
- B) Five (5) inner conductors (see specification for corresponding VSWR values).
- C) A foam-lined, wood instrument case for protection and storage.



Specifications

Frequency Range	DC to 18.0 GHz
Nominal Impedance	49.987 for 1.00 VSWR
Mismatch Values (VSWR)	1.00, 1.10, 1.25, 1.50, 2.00 (based on nominal impedance)
Electrical Length	.7495cm
Odd 1/4-λ Frequencies	.1, 3, 5, 7, 9, 11, 13, 15, 17 GHz

7mm Two-Port Mismatch Air Line Standard Sets

Model 2654B

Features

- ▶ DC to 18.0 GHz
- ▶ Beadless LPC7(F) Connectors

Description

The Maury 2654B precision air line standard set contains calculable two-port 7mm coaxial air lines¹. These standards are provided with the step discontinuity separated from the connector interface for better accuracy².

The set consists of a precision outer conductor with beadless 7mm connectors and three center conductors. Each center conductor has a different diameter to produce an accurately known VSWR which is directly calculable from the mechanical dimension. They employ self-centering, spring-loaded pins to allow connection easily without tools.

Also available are the Maury 2654S15 and 2654S60 which are individual two-port standards with $\Gamma = 0.15$ and 0.60 , respectively.



Specifications

Frequency Range	DC to 18.0 GHz
VSWR:	
$\Gamma = 0$	1.005 maximum
$\Gamma = 0.15$	1.350 ± 0.025
$\Gamma = 0.60$	4.00 ± 0.25
Reference Impedance	50 ohm
Nominal Overall Electrical Length	10cm
Nominal Mismatch Section Electrical Length	.75cm
Odd 1/4-λ Frequencies	.1, 3, 5, 7, 9, 11, 13, 15, 17 GHz

¹ Beatty, R.W., "Calculated and Measured S₁₁, S₂₁, and Group Delay for Simple Types of Coaxial and Rectangular Waveguide 2-port Standards", NBS Technical Note No. 657, Dec. 1974.

² Maury, M.A. Jr., and Simpson, G.R., "Two-Port Verification Standards in 3.5mm and 7mm for Vector Automatic Network Analyzers", Microwave Journal, June, 1984; pp. 101-110.