

PRECISION/REFERENCE AIR LINES

REFERENCE AIR LINES – TYPE N CONNECTORS



2553T

Description

The 2553 series reference air lines utilize beadless type N connectors which are integral to the air lines, thereby producing extremely low reflection transmission lines. The complete air lines (inner and outer conductor) are fabricated from gold-plated, low-loss copper alloys.

Specifications

Frequency Range DC to 18 GHz
 VSWR $<1.02 + 0.002f$ (GHz)
 Characteristic Impedance 50 ± 0.2 ohm
 where skin depth is negligible
 Electrical Length See chart
 Accuracy of Electrical Length ± 0.01 cm
 Connector Beadless precision type N
 (one female, one male)

Model	Electrical Length (cm)	Odd 1/4-Wavelength Frequency (GHz) [2]
2553T30	29.969	(2n + 1) 0.25
2553T15	14.983	(2n + 1) 0.50
2553T10	9.988	(2n + 1) 0.75
2553T7.5	7.493	(2n + 1) 1.00
2553T6	5.993	(2n + 1) 1.25
2553T5	4.994	(2n + 1) 1.50
2553T3	2.9969	(2n + 1) 2.50

Type N Reference Air Line Kit

Model 2553K2 is a kit consisting of six reference air lines listed in the chart above. The lines are provided in an attractive foam-lined wooden instrument case.

PRECISION AIR LINES – TYPE N CONNECTORS

Description

The 2503 series precision air lines utilize stainless steel type N connectors in which the center conductor is supported by a low-loss dielectric bead. The air lines (inner and outer conductor) are fabricated from gold-plated, low-loss copper alloys.

Specifications

Frequency Range DC to 18 GHz
 VSWR $<1.03 + 0.003f$ (GHz)
 Characteristic Impedance 50 ± 0.2 ohm
 where skin depth is negligible
 Electrical Length See chart
 Accuracy of Electrical Length ± 0.02 cm
 Connector Precision type N [1]
 (one female, one male)

Model	Electrical Length (cm)	Odd 1/4-Wavelength Frequency (GHz) [2]
2503A	29.979	(2n + 1) 0.25
2503B	19.986	(2n + 1) 0.375
2503C	14.990	(2n + 1) 0.50
2503D	9.993	(2n + 1) 0.75
2503E	7.495	(2n + 1) 1.00
2503F	5.996	(2n + 1) 1.25
2503G	4.997	(2n + 1) 1.50

Type N Precision Air Line Kits

Air lines are available in the following kits and are supplied in an attractive foam-lined wooden instrument case.

Model	Consisting of
2503K	2503A, C, D, E, G
2503L	2503A, B, C, D, E, F, G

[1] Precision stainless steel type N per 5E-049.

[2] Frequencies at which the electrical length is an odd multiple of a 1/4-wavelength where n is zero or an integer.