

PRECISION VNA CALIBRATION KITS

COAXIAL – TNC CONNECTORS

Description

Maury precision TNC connector calibration kits described in this data sheet are designed for use with Vector Network Analyzers (VNA) supplied with 7mm, 3.5mm or 2.92mm test set connectors and cables¹. With these kits, you can make error-corrected measurements of devices supplied with TNC connectors from DC to 18 GHz.

These kits are supplied with a full complement of calibration standards; shorts, opens, sliding and fixed loads. Rugged test port adapters and a complete set of phase matched TNC adapters are also provided. All required calibration standards, adapters and accessories, along with the applicable software medium (cartridge, 3-1/2 disk or USB drive as applicable containing the calibration constants²) and operating instructions, are supplied in an attractive foam-lined wooden instrument case.

The table below shows the calibration kits that are available.



8650E15

Connector Description

The TNC connectors (MPC/TNC) supplied in this kit are precision stainless steel connectors that mate with MIL-C-39012 and MIL-T-81490 connectors. They are low VSWR connectors rated from DC to 18 GHz. For interface specifications for these connectors, please refer to Maury data sheet 5E-053.

VNA Manufacturer and Model									Adapter Set	Test Set and Cable Connectors
Rohde & Schwarz	Agilent					Anritsu				
	ENA	8510A/B	8510C	8719/20/22	8753	PNA	360	37000		
11	12	13	14	15	16	17	28	29	8650Z14	7mm
31	32	33	34	35	36	37	38	39	8650Z15	2.92/3.5mm

Equipment Provided

The following items are provided in these kits:

- a) 1 each — Precision fixed termination, TNC female, model 332E
- b) 1 each — Precision fixed termination, TNC male, model 332F
- c) 1 each — Fixed short, TNC female, model 8615A
- d) 1 each — Fixed short, TNC male, model 8615B
- e) 1 each — Open circuit, TNC female, model 8609B

See page 3 for footnotes.



- f) 1 each — Open circuit, TNC male, model 8610B
- g) 1 each — Sliding termination, TNC female, model 452A1
- h) 1 each — Sliding termination, TNC male, model 452B1
- i) 1 each — Calibration constants medium² (contains circuit constants)
- j) 1 each — Instrument case
- k) 1 each — Operating instructions

- b) Model 232B11, TNC in-series adapter, male to male
- c) Model 232C11, TNC in-series adapter, female to male

Torque Wrench: Model 2698G1 (0.562 hex, 12 in./lbs.)

Specifications

Fixed Terminations⁶:

Model 332E, TNC female	
Model 332F, TNC male	
Frequency Range	DC - 18 GHz
VSWR	1.06 maximum, DC - 4 GHz
	1.10 maximum, 4 - 12 GHz
	1.15 maximum, 12 - 18 GHz
Impedance	50 ohms nominal
Power handling	1 watt CW

Fixed Shorts:

Model 8615A, TNC female	
Model 8615B, TNC male	
Frequency Range	DC - 18 GHz
Reflection Coefficient	0.98 minimum
Impedance	50 ohms nominal

Open Circuits:

Model 8609B, TNC female	
Model 8610B, TNC male	
Frequency Range	DC - 18 GHz
Reflection Coefficient	0.98 minimum
Impedance	50 ohms nominal

Sliding Terminations:

Model 452A1, TNC female	
Model 452B1, TNC male	
Frequency Range	1.8 - 18 GHz
VSWR (terminating element)	1.05 maximum
Impedance	50 ohms nominal
Travel	greater than 1/2 wavelength at lowest frequency
Power handling	5 watts CW, 1 kW peak

Adapter Options

The following adapter sets are included with these kits (see table on page 1).

7mm Adapters (Adapter Set 8650Z14):

- a) 2 each — 7mm to TNC female, model 2622A1³
- b) 2 each — 7mm to TNC male, model 2622B³

3.5mm Adapters (Adapter Set 8650Z15):

- a) 1 each — Test port adapter, NMD3.5 female⁴ to TNC female, model 8619A
- b) 1 each — Test port adapter, NMD3.5 female⁴ to TNC male, model 8619B
- c) 1 each — Adapter, TNC female to 3.5mm female, model 8025A1⁵
- d) 1 each — Adapter, TNC male to 3.5mm female, model 8025B1⁵
- e) 1 each — Adapter, TNC female to 3.5mm male, model 8025C1⁵
- f) 1 each — Adapter, TNC male to 3.5mm male, model 8025D1⁵

Additional Accessories and Equipment Available (but not provided)

Connector Gage: Model A012A

Adapters: The following phase matched adapters are also available:

- a) Model 232A11, TNC in-series adapter, female to female

See page 3 for footnotes.

