

# VNA AND VNMS CALIBRATION KITS



3651A Option 1



3654D

The Anritsu Calibration Kits contain all the precision components and tools required to calibrate your VNA or VNMS for 12-term error-corrected measurements in the connector style of your choice. Components are included for calibrating male and female test ports as required. The kits support calibration with opens, shorts, and broadband loads. Option 1 adds sliding terminations and a pin depth gauge where required.

**The following kits are for use with 37xxx Lightning VNAs, MS464xA VectorStar, and MS20xxx VNA Master.**

## 3650A SMA/3.5 mm Calibration Kit consisting of:

- 34ASF50-2 Female Adapter (2)
- 33SFSF50 Female-Female Adapter (2)\*
- 33SS50 Male-Male Adapter\*
- 28SS50-2 Broadband Male Termination (2)
- 28SF50-2 Broadband Female Termination (2)
- 33SSF50 Male-Female Adapter (2)\*
- 24S50 Male Open
- 24SF50 Female Open
- 23S50 Male Short
- 23SF50 Female Short
- 34AS50-2 Male Adapter (2)
- Connector Thumb Wheel (4)
- 01-201 Torque Wrench
- 01-210 Reference Flat
- 01-222 Pin Depth Gauge
- 01-223 Pin Depth Gauge
- Calibration coefficients diskette
- Calibration coefficients memory stick

## Option 1

### Adds the following:

- 17SF50 Female Sliding Termination
- 17S50 Male Sliding Termination

## 3651A GPC-7 Calibration Kit consisting of:

- 28A50-2 Broadband Termination (2)
- 24A50 Open
- 23A50 Short
- 01-200 Torque Wrench
- 01-221 Collet Extractor Tool and 4 Collets
- Calibration coefficients diskette
- Calibration coefficients memory stick

## Option 1

### Adds the following:

- 17A50 Sliding Termination
- 01-210 Reference Flat
- 01-220 Pin Depth Gauge

## 3652A K Connector® Calibration Kit consisting of:

- 34AKF50 Female Adapter (2)
- 33KFKF50B Female-Female Adapter (2)\*
- 33KK50B Male-Male Adapter\*
- 28K50A Broadband Male Termination (2)
- 28KF50A Broadband Female termination (2)
- 33KKF50B Male-Female Adapter (2)\*
- 24K50 Male Open
- 24KF50 Female Open
- 23K50 Male Short
- 23KF50 Female Short
- 34AK50 Male Adapter (2)
- 01-201 Torque Wrench
- 01-210 Reference Flat
- 01-222 Pin Depth Gauge
- 01-223 Pin Depth Gauge
- Calibration coefficients diskette
- Connector thumb wheel (4)
- Calibration coefficients memory stick

## Option 1

### Adds the following:

- 17KF50 Female Sliding Termination
- 17K50 Male Sliding Termination

## 3653A Type N Calibration Kit consisting of:

- 23NF50 Female Short
- 23N50 Male Short
- 24NF50 Female Open
- 24N50 Male Open
- 28N50-2 Broadband Male Termination (2)
- 28NF50-2 Broadband Female Termination (2)
- 34AN50-2 Male Adapter (2)
- 34ANF50-2 Female Adapter (2)
- 01-213 Reference Gauge
- 01-224 Pin Depth Gauge
- Calibration coefficients diskette
- Calibration coefficients memory stick

# VNA AND VNMS CALIBRATION KITS

The following kits are recommended for use with 37xxx Lightning and MS464xA VectorStar.

## 3654D V Connector® Calibration Kit consisting of:

- 23V50C-5.1 Male Short 5.1mm
- 23VF50C-5.1 Female Short 5.1mm
- 24V50C Male Open
- 24VF50C Female Open
- 28V50D Male Broadband Termination (2)
- 28VF50D Female Broadband Termination (2)
- 33VV50C Male-Male Adapter\*
- 33VVF50C Female-Female Adapter (2)\*
- 33VVF50C Male-Female Adapter (2)\*
- Calibration coefficients diskette
- Connector thumb wheel (4)
- 01-201 Torque Wrench
- 01-210 Reference Flat
- 01-322 Pin Depth Gauge
- 01-323 Female Adapter for pin gauge
- 01-204 Adapter Wrench
- 01-312 Male Flush Short
- 01-311 Female Flush Short
- Calibration coefficients memory stick

## Option 1

Adds the following:

- 17VF50C Female Sliding Load
- 17V50C Male Sliding Load

## 3655 Series Waveguide Calibration Kit

The 3655 Series Calibration Kit contains all of the precision components and tools required to calibrate your VNA for 12-term error-corrected measurements of test devices with the appropriate waveguide designation. Components are included for calibrating both module ports. The kit supports calibration with offset shorts and broadband loads. Option 1 adds a sliding termination.

Consisting of:

- Short, Flush (2)
- Offsets, 1/8 and 3/8 Wavelength
- Terminations, Fixed (2)
- Test Port Sections (2)

## Option 1

Adds the following:

- Sliding Termination

## 3656B W1 Calibration Kit consisting of:

- 23W50-1 Male Offset Short (2.02 mm)
- 23W50-2 Male Offset Short (2.65 mm)
- 23W50-3 Male Offset Short (3.180 mm)
- 24W50 Male Open (1.510 mm)
- 28W50 Male Broadband Termination
- 23WF50-1 Female Offset Short 1 (2.02 mm)
- 23WF50-2 Female Offset Short 2 (2.65 mm)
- 23WF50-3 Female Offset Short 3 (3.180 mm)
- 28WF50 Female Broadband Termination
- 24WF50 Female Open (1.930 mm)
- 33WSC50 Fixed Male SC Connector
- 33WFSC50 Fixed Female SC Connector
- Interchangeable Sliders, SC Connectors
- Locking Keys, SC Connectors
- 01-402 Interchange Adapter Fixed Male
- 33WWF50 Male-Female Adapter
- 33WW50 Male-Male Adapter
- 33WFWF50 Female-Female Adapter
- 01-504 6 mm Torque Wrench
- 01-505 6-7 mm End Wrench
- 18WWF50-1B Stepped Impedance ThruLine (Verification Device)
- 18WWF50-1 50Ω Matched ThruLine (Verification Device)
- Calibration coefficients diskette
- Calibration coefficients memory stick

The following kits are compatible with MS20xx VNA Master. They are not recommended for use with the 37xxx Lightning or MS464xA VectorStar.

## 3750R SMA/3.5 mm 9 GHz Calibration Kit consisting of:

- 23LF50 Female Short
- 23L50 Male Short
- 24LF50 Female Open
- 24L50 Male Open
- 28L50R Male Termination (2)
- 28LF50R Female Termination (2)
- 01-204 Adapter wrench
- Calibration coefficients diskette

## 3751R GPC-7 9 GHz Calibration Kit consisting of:

- 23A50 Short
- 24A50 Open
- 28A50R Termination (2)
- Calibration coefficients diskette

## 3753R Type N 9 GHz Calibration Kit consisting of:

- 23NF50 Female Short
- 24NF50 Female Open
- 24N50 Male Open
- 28NF50R Female Termination (2)
- 28N50R Male Termination (2)
- 23N50 Male Short
- Calibration coefficients diskette

## 3753-75R 75 Ω Type N 3 GHz Calibration Kit consisting of:

- 23N75-3 Male Short
- 23NF75-3 Female Short
- 24N75-3 Male Open
- 24NF75-3 Female Open
- 28N75-3 Male Termination (2)
- 28NF75-3 Female Termination (2)
- 34NN75-3 Male-Male Adapter
- 34NNF75-3 Male-Female Adapter
- 34NFF75-3 Female-Female Adapter
- Calibration coefficients diskette

## Ordering information

Please specify model/order number, name and quantity when ordering.

Model/Order No.	Name
	<b>Calibration kits</b>
3650A	SMA/3.5 mm calibration kit
Option 1	Adds sliding terminations
3651A	GPC-7 calibration kit
Option 1	Adds sliding terminations
3652A	K Connector® calibration kit
Option 1	Adds sliding terminations
3653A	Type N calibration kit
3654D	V Connector® calibration kit
Option 1	Adds sliding terminations
3655E	WR12 Waveguide calibration kit
Option 1	Adds sliding terminations
3655V	WR15 Waveguide calibration kit
Option 1	Adds sliding terminations
3655W	WR10 Waveguide calibration kit
Option 1	Adds sliding terminations
3656B	W1 calibration kit
3750R	SMA/3.5 mm 9 GHz calibration kit
3751R	GPC-7 9 GHz calibration kit
3753R	Type N 9 GHz calibration kit
3753-75R	75 Ω Type N 3 GHz calibration kit

\* Phase Equal Adapters