



**V12CAL Series**  
**WR12 Waveguide Calibration Kit**  
**60 to 90 GHz**

**DESCRIPTION**

The V12CAL Series will accurately calibrate your existing Vector Network Analyzer (VNA) so you can obtain precise millimeter wave S-parameters in WR12 (60-90 GHz). All calibration kits are compatible with TRL & SSoLT two-port calibration techniques. The availability of an adjustable waveguide load enables the calibration flexibility to conduct sliding load calibration techniques (e.g., SSoLs). Each calibration kit is supplied with mechanical calibration data.



**HIGHLIGHTS**

- Precision waveguide calibration components enable accurate & repeatable measurements

**APPLICATIONS**

- Error corrected S-parameters for millimeter wave applications utilizing waveguide interfaces

**ELECTRICAL AND PERFORMANCE SPECIFICATIONS (+25°C)**



Electrical Characteristics <sup>1</sup>	MIN	TYP	MAX
System Operating Frequency (WR-12) <sup>2</sup>	60 GHz	--	90 GHz
Length of Shim (1/4 wavelength)	.0533 +/- .0002 in		
Return Loss of Fixed Load, Adjustable Load	--	>35 dB	--
Damage Level	--	+13 dBm	--
Operating Temperature Range	+20 °C	+25 °C	+30 °C

<sup>1</sup> Specifications are subject to change without notification.

<sup>2</sup> Test Port Flange Configuration is compatible with MIL-DTL-3922/67D (UG387/U-M)

**ORDER INFORMATION**

Part Number	Overview	Contents
<b>V12CAL</b> <b>Universal Calibration Kit</b>		2 ea. Waveguide Loads 1 ea. Adjustable Waveguide Load 1 ea. Waveguide Section (test artifact) 2 ea. Precision Waveguide Flush Shorts 1 ea. Precision Waveguide Shim (1/4 wavelength) 1 ea. #4-40 Hex Screwdriver 8 ea. Alignment Pins 12 ea. WG Screws 1 ea. USB Flash Drive (mechanical calibration data) 1 ea. 3.5" Floppy Disk (mechanical calibration data) 1 ea. Laminated Card (mechanical calibration data)
<b>V12CAL1</b> <b>Standard Calibration Kit</b>		1 ea. Waveguide Load 1 ea. Waveguide Section (test artifact) 1 ea. Precision Waveguide Flush Short 1 ea. Precision Waveguide Shim (1/4 wavelength) 1 ea. #4-40 Hex Screwdriver 8 ea. Alignment Pins 12 ea. WG Screws 1 ea. USB Flash Drive (mechanical calibration data) 1 ea. 3.5" Floppy Disk (mechanical calibration data) 1 ea. Laminated Card (mechanical calibration data)
<b>V12CAL2</b> <b>Standard Calibration Kit plus Sliding Load</b>		1 ea. Waveguide Load 1 ea. Adjustable Waveguide Load 1 ea. Waveguide Section (test artifact) 1 ea. Precision Waveguide Flush Short 1 ea. Precision Waveguide Shim (1/4 wavelength) 1 ea. #4-40 Hex Screwdriver 8 ea. Alignment Pins 12 ea. WG Screws 1 ea. USB Flash Drive (mechanical calibration data) 1 ea. 3.5" Floppy Disk (mechanical calibration data) 1 ea. Laminated Card (mechanical calibration data)



## V12CAL3

**Standard  
Calibration  
Kit plus  
1 additional Load &  
1 additional Short**



- 2 ea. Waveguide Loads
- 1 ea. Waveguide Section (test artifact)
- 2 ea. Precision Waveguide Flush Shorts
- 1 ea. Precision Waveguide Shim (1/4 wavelength)
- 1 ea. #4-40 Hex Screwdriver
- 8 ea. Alignment Pins
- 12 ea. WG Screws
- 1 ea. USB Flash Drive (mechanical calibration data)
- 1 ea. 3.5" Floppy Disk (mechanical calibration data)
- 1 ea. Laminated Card (mechanical calibration data)