DESCRIPTION
The V05CAL Series will accurately calibrate your existing Vector Network Analyzer (VNA) so you can obtain precise millimeter wave S-parameters in WR05 (140-220 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)

<table>
<thead>
<tr>
<th>Electrical Characteristics</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Operating Frequency (WR-05)</td>
<td>140 GHz</td>
<td>--</td>
<td>220 GHz</td>
</tr>
<tr>
<td>Length of Shim (1/4 wavelength)</td>
<td>.0224 +/- .0002in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return Loss of Fixed Load, Adjustable Load</td>
<td>--</td>
<td>&gt;28 dB</td>
<td>--</td>
</tr>
<tr>
<td>Damage Level</td>
<td>--</td>
<td>+13 dBm</td>
<td>--</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>+20 °C</td>
<td>+25 °C</td>
<td>+30 °C</td>
</tr>
</tbody>
</table>

1 Specifications are subject to change without notification.
2 Test Port Flange Configuration is compatible with MIL-DTL-3922/67D (UG387/U-M)

ORDER INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Overview</th>
<th>Contents</th>
</tr>
</thead>
</table>
| V05CAL      | Universal Calibration Kit | 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) |
| V05CAL1     | Standard Calibration Kit | 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) |
| V05CAL2     | Standard Calibration Kit plus Sliding Load | 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) |
| V05CAL3 Standard Calibration Kit plus 1 additional Load & 1 additional Short |
|-------------|-----------------------------|
| 2 ea. Waveguide Loads          | 2 ea. Waveguide Section (test artifact) |
| 1 ea. Waveguide Flush Shorts   | 1 ea. Precision Waveguide Shim (1/4 wavelength) |
| 1 ea. #4-40 Hex Screwdriver    | 1 ea. Precision Waveguide Shim (1/4 wavelength) |
| 8 ea. Alignment Pins           | 1 ea. #4-40 Hex Screwdriver |
| 12 ea. WG Screws               | 1 ea. USB Flash Drive (mechanical calibration data) |
| 1 ea. 3.5" Floppy Disk (mechanical calibration data) | 1 ea. 3.5" Floppy Disk (mechanical calibration data) |
| 1 ea. Laminated Card (mechanical calibration data) | 1 ea. Laminated Card (mechanical calibration data) |

V05CAL Datasheet: Rev B  
Release: 01-2021

OML Inc.
300 Digital Drive • Morgan Hill, CA 95037 • Tel: (408) 779-2698 • Fax: (408) 778-0491 • email: info@omlincl.com • www.omlincl.com