

# OPEN • SHORT • LOAD

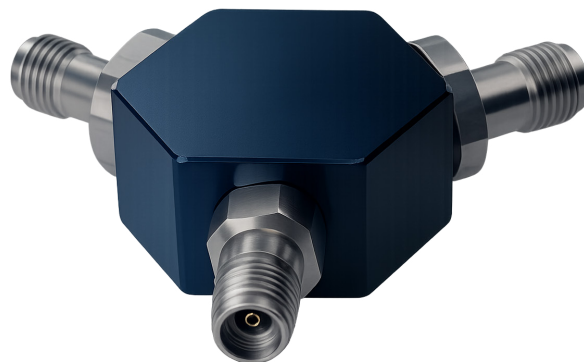
## Calibration Standard

## 2.92mm Female

### HAOSL-29J-43

DC to 43.5 GHz • 50  $\Omega$

The HASCO RF 2.92mm Female Open-Short-Load Calibration Standard provides accurate and repeatable calibration for Vector Network Analyzers (VNA) up to 43.5 GHz. The integrated OSL design combines Open, Short, and Precision Load standards in a rugged, compact assembly ideal for laboratory, production, and field applications.



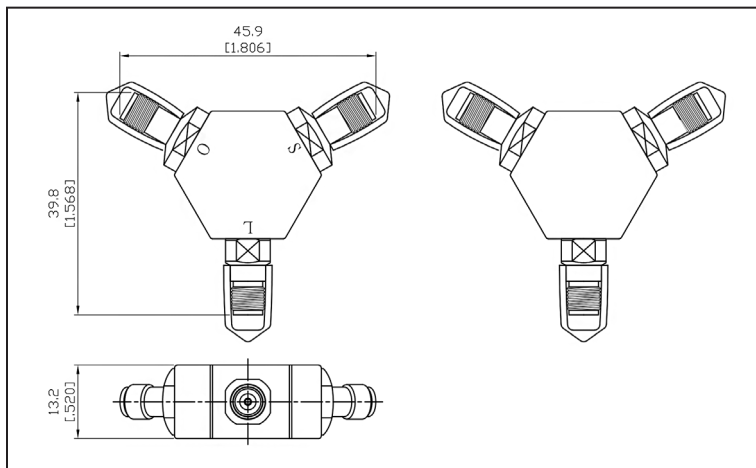
### Features

- Integrated Open, Short, Load
- Compact one-piece design
- High return loss performance
- Low phase error
- Rugged Aluminum construction
- Laser engraved port identification
- Includes calibration data

### Applications

- VNA Calibration
- RF & Microwave Test Systems
- Production Test / ATE
- Aerospace & Defense
- SATCOM
- Research & Development

### Outline Drawing



### Calibration & Care

Each calibration standard or calibration kit is supplied with its own fully characterized calibration coefficient datasheet.

- Recommended calibration temperature: 20°C to 25°C
- Keep connector interfaces clean and protected
- Install protective caps when not in use
- Use calibrated torque wrench during mating
- Calibration data provided with each unit

### Electrical

- |                            |                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------|
| • Impedance                | 50 $\Omega$                                                                                                  |
| • DC Resistance            | 50 $\pm$ 0.25 $\Omega$                                                                                       |
| • Max Power                | 0.25 Watts                                                                                                   |
| • Frequency Range          | DC - 43.5 GHz                                                                                                |
| • Phase Error (Open/Short) | $\leq$ 1° (DC - 6 GHz)<br>$\leq$ 3° (6 - 26.5 GHz)<br>$\leq$ 5° (26.5 - 40 GHz)<br>$\leq$ 6° (40 - 43.5 GHz) |
| • Return Loss (Open/Short) | $\leq$ 0.10 dB (DC - 18 GHz)<br>$\leq$ 0.25 dB (18 - 43.5 GHz)                                               |
| • Return Loss (Load)       | $\geq$ 42 dB (DC - 6 GHz)<br>$\geq$ 30 dB (6 - 43.5 GHz)                                                     |
| • Capacitance (Open)       | 5.0 (1E-15) F<br>1.5 (1E-36) F/Hz <sup>2</sup>                                                               |
| • Inductance (Short)       | 8.0 (1E-12) H<br>33.0 (1E-33) H/Hz <sup>2</sup>                                                              |

### Mechanical

- |                            |          |
|----------------------------|----------|
| • Open/Short Offset Length | 16.70 ps |
|----------------------------|----------|

### Environmental

- |                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| • Temperature Range | -20°C to 75°C (storage)                                                                         |
| • Temperature Range | 20°C to 25°C (optimal)                                                                          |
| • RoHS              | Compliant  |

### Material

- |              |                            |
|--------------|----------------------------|
| • Housing    | Anodized Aluminum          |
| • Body & Nut | Passivated Stainless Steel |
| • Dielectric | PPO                        |
| • Contact    | Gold Plated BeCu           |
| • Cap        | PVC                        |