

BNC SOL VNA Calibration Kit up to 10 GHz, Including Short Circuit, Open Circuit, and Load

Fairview Microwave’s BNC 18 GHz VNA calibration kit is used to calibrate a Vector Network Analyzer (VNA) and associated test setup, thus removing the test instrumentations influence on the device under test (DUT) and allowing the best possible error-free characterization of the DUT. The FMCK1024 SOL cal kit includes BNC male and female fully-characterized Short Circuits, Open Circuits, and Fixed Loads used in a standard multi-port VNA calibration process. Component correction factors have also been documented and are supplied in this VNA calibration kit datasheet. The data file may be downloaded from the FMCK1024 product page on Fairview Microwave’s web site or requested by contacting technical support.

A properly performed n-port SOL calibration allows for full characterization of the VNA test ports. RF calibrations performed using high-quality VNA test cables effectively extends the vector network analyzer test ports to the end of the cables, and this allows for greater flexibility when characterizing a product under test.

Available in-stock and ships same day!

Configuration

Connector
Frequency Range

BNC
DC to 10 GHz



Features:

- Cal kit definition files for Keysight, Rohde & Schwarz, and Anritsu VNAs
- Works with all major VNAs
- Protective wooden case for safe storage of components

Applications:

- Calibration of Vector Network Analyzers
- Research and development
- Aerospace and defense
- Production test environments

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Electrical Specifications for FMCK1024 BNC Devices

Item	Part Number	Specifications	Frequency (GHz)
Female Termination	FMTR1064	1.04 Max VSWR	DC to 2 2 to 4 4 to 10
Male Termination	FMTR1065	1.1 Max VSWR 1.2 Max VSWR	
Female Short	FMSC3019	±5.0° deviation from nominal	DC to 10
Male Short	FMSC3020		
Female Open	FMSC3034	±5.0° deviation from nominal	DC to 10
Male Open	FMSC3035		

FMSC3019 BNC Female Short Specifications



ELECTRICAL		UNIT
Frequency Range	DC to 10	GHz
Phase	DC to 10GHz ±5.0°	Max
Offset Impedance	50	Ω
Offset Loss	1.5	GΩ/s
Electrical Delay	60.21	nS
Inductance	L0 x 10 ⁻¹² = 0.0	H
	L1 x 10 ⁻²⁴ = 0.0	H/Hz
	L2 x 10 ⁻³³ = 0.0	H/Hz ²
	L3 x 10 ⁻⁴² = 0.0	H/Hz ³
MECHANICAL		
Housing	Brass (Nickel Plate Finish)	
Connector	BNC Female	
Screw Thread	N/A	
Dimensions	0.56 [1.42]∅, 1.2 [30.5] Length	
Pin Depth	0.208 + 0/ -0.005	

FMSC3020 BNC Male Short Specifications



ELECTRICAL		UNIT
Frequency Range	DC to 10	
Phase	DC to 10GHz	±5.0°
Offset Impedance	50	
Offset Loss	1.5	
Electrical Delay	84.29	
Inductance	$L0 \times 10^{-12} = 0.0$	H
	$L1 \times 10^{-24} = 0.0$	H/Hz
	$L2 \times 10^{-33} = 0.0$	H/Hz ²
	$L3 \times 10^{-42} = 0.0$	H/Hz ³

MECHANICAL	
Housing	Beryllium Copper (Nickel Plate Finish)
Connector	BNC Male
Screw Thread	N/A
Dimensions	0.545 [13.7]Ø, 1.14 [28.9] Length
Pin Depth	0.209 + 0.005/ - 0

FMSC3034 BNC Female Open Specifications



ELECTRICAL		UNIT
Frequency Range	DC to 10	GHz
Phase	DC to 10GHz $\pm 5.0^\circ$	Max
Offset Impedance	50	Ω
Offset Loss	1.5	G Ω /s
Electrical Delay	56.24	pS
Capacitance	$C0 \times 10^{-15} = 57$	F
	$C1 \times 10^{-27} = 1350$	F/Hz
	$C2 \times 10^{-36} = 275$	F/Hz ²
	$L3 \times 10^{-45} = -35$	F/Hz ³
MECHANICAL		
Housing	Brass (Nickel Plate Finish)	
Connector	BNC Female	
Screw Thread	N/A	
Dimensions	0.56 [14.22] ϕ , 1.22 [30.99] Length	
Pin Depth	0.208 + 0/ -0.005	

FMSC3035 BNC Male Open Specifications



ELECTRICAL		UNIT
Frequency Range	DC to 10	GHz
Phase	DC to 10GHz ±5.0°	Max
Offset Impedance	50	Ω
Offset Loss	1.5	GΩ/s
Electrical Delay	80.16	pS
Capacitance	$C0 \times 10^{-15} = 62$	F
	$C1 \times 10^{-27} = 450$	F/Hz
	$C2 \times 10^{-36} = 235$	F/Hz ²
	$L3 \times 10^{-45} = -10$	F/Hz ³
MECHANICAL		
Housing	Beryllium Copper (Nickel Plate Finish)	
Connector	BNC Male	
Screw Thread	N/A	
Dimensions	0.545 [13.71]∅, 1.14 [28.95] Length	
Pin Depth	0.209 + 0.005/0	

FMTR1064 BNC Female Termination



ELETRICAL			UNIT
Frequency Range	DC to 10		GHz
VSWR at Frequency Range	DC to 2 GHz	1.04	Max
	2 to 4 GHz	1.1	Max
	4 to 10 GHz	1.2	Max
Impedance	50		Ω
Power Rating	1 watt CW		
	1kW Peak		

MECHANICAL	
Housing	Brass (Nickel Plate Finish)
Connector	BNC Female
Screw Thread	N/A
Dimensions	0.56 [14.22] ϕ , 1.51 [38.4] Length
Pin Depth	0.208 + 0/ - 0.005

FMTR1065 BNC Male Termination



ELETRICAL			UNIT
Frequency Range	DC to 10		GHz
VSWR at Frequency Range	DC to 2 GHz	1.04	Max
	2 to 4 GHz	1.1	Max
	4 to 10 GHz	1.2	Max
Impedance	50		Ω
Power Rating	1 watt CW		
	1kW Peak		

MECHANICAL	
Housing	Brass (Nickel Plate Finish)
Connector	BNC Male
Screw Thread	N/A
Dimensions	0.54 [13.7] ϕ , 1.43 [36.4] Length
Pin Depth	0.209 + 0.005/ - 0

General Instructions and Usage Notes

#	Notes
1	Keep provided protective blue caps installed when not in use.
2	Store in climate controlled environment.
3	Always keep connectors clean.
4	Avoid touching the connector interface.
5	Use caution when handling.
6	For female components, do not insert male pin greater than 0.037" [.94 mm]. Failure to comply will result in damage to the female connector.
7	When mating, always ensure that the components to be interconnected remain in a fixed position while rotating only the coupling nut slowly to mate the connectors.
8	When de-mating, always ensure that the interconnected components remain in a fixed position while rotating only the coupling nut slowly to de-mate the connectors.
9	Visually inspect the connector threads prior to use. If needed, clean the center conductor pin and outer conductor with alcohol to remove any debris that may be present. Be sure to apply the alcohol in a circular motion with a lint-free cloth or applicator.
10	Use at room temperature.

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

- Values at 25 °C, sea level

BNC SOL VNA Calibration Kit up to 10 GHz, Including Short Circuit, Open Circuit, and Load from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [BNC SOL VNA Calibration Kit up to 10 GHz, Including Short Circuit, Open Circuit, and Load FMCK1024](#)

URL: <https://www.fairviewmicrowave.com/bnc-short-open-load-sol-analyzer-calibration-kit-10ghz-fmck1024-p.aspx>

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