Fairview Microwave
an INFINITE brand

FMCK1021
DATA SHEET

7/16 DIN SOL VNA Calibration Kit up to 7.5 GHz, Including Short Circuit, Open Circuit, and Load

Fairview Microwave's 7/16 DIN 7.5 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 FMCK1021 SOL cal kit includes 7/16 DIN male and female fully-characterized Short Circuits, Open Circuits, and Fixed Loads used in a standard multi-port VNA calibration process. In addition to the RF calibration standards, a fixed torque break-over style torque wrench and a set of open-ended wrenches are included for use in mating and de-mating calibration components. Component correction factors have also been documented and are supplied in this VNA calibration kit datasheet. The data file may be downloaded from the FMCK1021 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	7/16 DIN
Frequency Range	DC to 7.5 GHz

Features:

- SOL or SOLT versions available
- Cal kit definition files for Keysight, Rohde & Schwarz, and Anritsu VNAs
- Works with all major VNAs
- Protective wooden case for safe storage of components
- Torque wrench and tools included

Applications:

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

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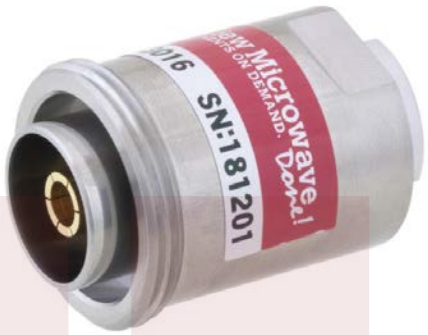
Electrical Specs for FMCK1021 7/16 DIN Devices

Item	Part Number	Specifications	Frequency (GHz)
Female Termination	FMTR1061	1.02 Max VSWR	DC to 4
Male Termination	FMTR1062	1.03 Max VSWR	4 to 7.5
Female Short	FMSC3016	±0.85° deviation from nominal	DC to 7.5
Male Short	FMSC3017		
Female Open	FMSC3031	±1.25° deviation from nominal	DC to 7.5
Male Open	FMSC3032		
Torque Wrench	ST-D-27MM-B20	20 in-lb Torque Setting	
Open End Wrench	FMTL1003	9/16" x 9/16" Dimensions	

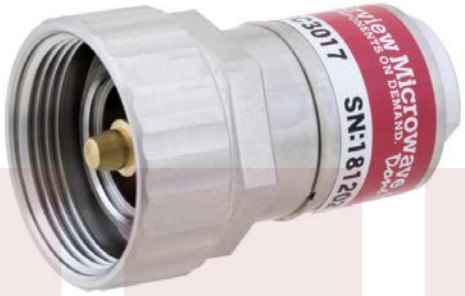
FMSC3016 7/16 DIN Female Short



ELECTRICAL			UNIT
Frequency Range	DC to 7.5		GHz
Phase	DC to 4GHz	±0.6°	Max
	4 to 7.5 GHz	±0.85°	Max
Offset Impedance	50		Ω
Offset Loss	0.63		GΩ/s
Electrical Delay	66.734		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	Stainless Steel
Connector	7/16 DIN Female
Screw Thread	M29 x 1.5-6G
Dimensions	1.050 [26.67]Ø, 1.62 [41.14] Length
Pin Depth	0.0697 + 0.0015/0

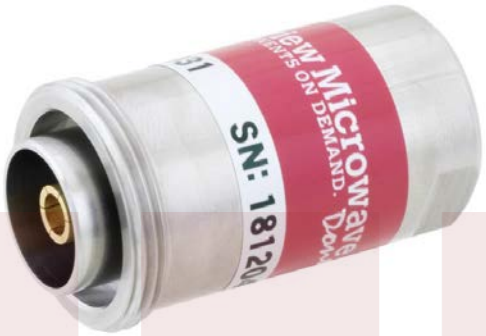
FMSC3017 7/16 DIN Male Short Specifications



ELECTRICAL			UNIT
Frequency Range	DC to 7.5		GHz
Phase	DC to 4GHz	±0.6°	Max
	4 to 7.5 GHz	±0.85°	Max
Offset Impedance	50		Ω
Offset Loss	0.63		GΩ/s
Electrical Delay	66.734		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	Stainless Steel
Connector	7/16 DIN Male
Screw Thread	M29 x 1.5-6G
Dimensions	1.311 [33.29]Ø, 1.98 [50.29] Length
Pin Depth	0.0697 + 0.0015/0

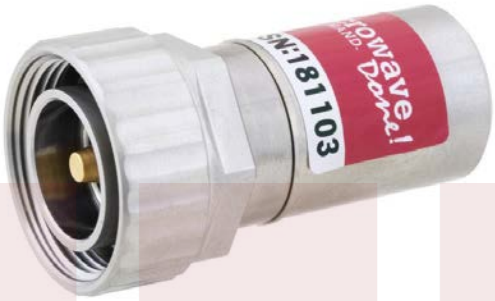
FMSC3031 7/16 DIN Female Open Specifications



ELECTRICAL			UNIT
Frequency Range	DC to 7.5		GHz
Phase	DC to 4GHz	±1.0°	Max
	4 to 7.5 GHz	±1.25°	Max
Offset Impedance	50		Ω
Offset Loss	0.63		GΩ/s
Electrical Delay	66.734		pS
Capacitance	C0 x 10^-15 = 32		F
	C1 x 10^-27 = 0.0		F/Hz
	C2 x 10^-36 = -50		F/Hz^2
	L3 x 10^-45 = 100		F/Hz^3

MECHANICAL	
Housing	Stainless Steel
Connector	7/16 DIN Female
Screw Thread	M29 x 1.5-6G
Dimensions	1.141 [28.98]Ø, 2 [50.80] Length
Pin Depth	0.0697 + 0.0015/0

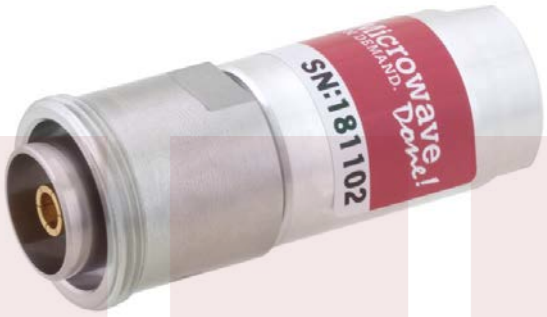
FMSC3032 7/16 DIN Male Open Specifications



ELECTRICAL			UNIT
Frequency Range	DC to 7.5		GHz
Phase	DC to 4GHz	±1.0°	Max
	4 to 7.5 GHz	±1.25°	Max
Offset Impedance	50		Ω
Offset Loss	0.63		GΩ/s
Electrical Delay	66.734		pS
Capacitance	C0 x 10^-15 = 32		F
	C1 x 10^-27 = 0.0		F/Hz
	C2 x 10^-36 = -50		F/Hz^2
	L3 x 10^-45 = 100		F/Hz^3

MECHANICAL	
Housing	Stainless Steel
Connector	7/16 DIN Male
Screw Thread	M29 x 1.5H-6H
Dimensions	1.311 [33.29]Ø, 2.31 [58.67] Length
Pin Depth	0.0697 + 0.0015/0

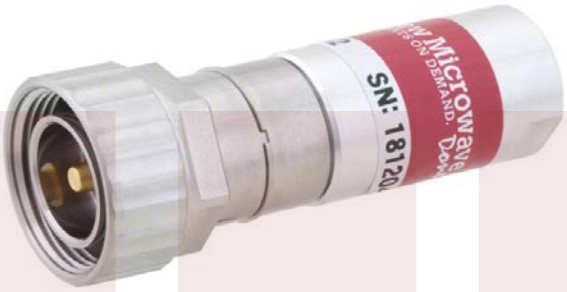
FMTR1061 7/16 DIN Female Termination Specifications



ELETRICAL			UNIT
Frequency Range	DC to 7.5		GHz
VSWR at Frequency Range	DC to 4 GHz	1.02	Max
	4 to 7.5 GHz	1.03	Max
Impedance	50		Ω
Power Rating	3 watt CW		
	1kW Peak		

MECHANICAL	
Housing	Stainless Steel/Aluminum
Connector	7/16 DIN Female
Screw Thread	M29 x 1.5-6G
Dimensions	1.05 [26.67]Ø, 2.758 [70.05] Length
Pin Depth	0.0682 - 0.0697

FMTR1062 7/16 DIN Male Termination Specifications



ELETRICAL			UNIT
Frequency Range	DC to 7.5		GHz
VSWR at Frequency Range	DC to 4 GHz	1.02	Max
	4 to 7.5 GHz	1.03	Max
Impedance	50		Ω
Power Rating	3 watt CW		
	1kW Peak		

MECHANICAL	
Housing	Stainless Steel/Aluminum
Connector	7/16 DIN Male
Screw Thread	M29 x 1.5H-6H
Dimensions	0.985 [25.019]Ø, 3.068 [77.927] Length
Pin Depth	0.0697 + 0.0015/0

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

7/16 DIN SOL VNA Calibration Kit up to 7.5 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: 7/16 DIN SOL VNA Calibration Kit up to 7.5 GHz, Including Short Circuit, Open Circuit, and Load FMCK1021

URL: https://www.fairviewmicrowave.com/7-16-din-short-open-load-sol-analyzer-calibration-kit-7.5ghz-fmck1021-p.aspx