

3.5mm Calibration Kit for General Purpose Includes Short Circuit, Open Circuit, Load and Thru Components Up to 8.5 GHz

The new FMCK1001 Calibration Kit from Fairview Microwave is designed to withstand daily use in high-traffic environments such as in the testing lab or on the production floor. This cost effective calibration kit provides reliable and accurate instrument tuning for all of your test and measurement requirements. Fairview Microwave carries a broad selection of off-the-shelf calibration kits and T&M components all of which ship the same day you order them.

Configuration

Connector 3.5mm
 Impedance 50 Ohms
 Frequency Range DC to 8.5 GHz

FMCK1001 Standard Kit Specifications

Part Number	Frequency Range	Connector Type	Connector Gender	Type	Impedance
FMSC2002	DC - 8500 MHz	3.5mm	Female	Open	50 Ohm
FMSC2003	DC - 8500 MHz	3.5mm	Male	Open	50 Ohm
FMSC1002	DC - 8500 MHz	3.5mm	Female	Short	50 Ohm
FMSC1003	DC - 8500 MHz	3.5mm	Male	Short	50 Ohm
FMTR1002	DC - 8500 MHz	3.5mm	Female	Load	50 Ohm
FMTR1003	DC - 8500 MHz	3.5mm	Male	Load	50 Ohm
FMSC3003	DC - 8500 MHz	3.5mm	Female to Female	Thru	50 Ohm
FMSC3004	DC - 8500 MHz	3.5mm	Male to Male	Thru	50 Ohm



Features:

- Functional from DC to 8.5 GHz
- Standard kit includes (8) 3.5mm short-open-load-thru (SOLT) components
- Suitable for many 50 Ohm network analyzers including, but not limited to:
 - Agilent / HP (8711/8712, 8713/8714, 8753, E5061A, E5062A, E5061B, E5071C, E5072A)
 - Anritsu / Advantest (MS2028S, MS2026S, MS2025S, MS2024S, MS2038C, MS2036C, MS2035B, MS2034B, MS4640B, R3755A, R3760)
 - Copper Mountain (5048, 804, 304, 818, 814)
 - Deviser (NA7300A, NA7100A)
 - EI41 (AV3656A)
 - OuFu (OF7631A, OF7633A)
 - PNA (PNA3766, PNA3767)
 - Rohde & Schwarz (ZVL, ZVC, ZVB)
 - Tianda (TD3616C, TD3617E, TD3618C, TD3619C)

Applications:

- VNA, Full 2-Port CAL
- VNA, Thru CAL
- VNA, Substitution CAL Method
- Test & Measurement
- Lab Equipment Accessories
- Engineering Test and Evaluation
- General Purpose Test and Evaluation

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FMSC2002 3.5mm Female Open Specifications



Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 8500		MHz
Impedance		50		Ohm
Phase, DC-3000 MHz	0.8	Nominal	0.8	Degrees
Phase, 3001 - 8500 MHz	1.2	Nominal	1.2	Degrees

Mechanical Specifications

Item	Description	Units
Housing	Phosphor Bronze	
Connector	50 Ohm 3.5mm Female	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.473 [12] ϕ , 0.733 [18.6] L	Inch [mm]
Net Weight	10	g

FMSC2003 3.5mm Male Open Specifications



Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 8500		MHz
Impedance		50		Ohm
Phase, DC-3000 MHz	0.8	Nominal	0.8	Degrees
Phase, 3001 - 8500 MHz	1.2	Nominal	1.2	Degrees

Mechanical Specifications

Item	Description	Units
Housing	Phosphor Bronze & Stainless Steel	
Connector	50 Ohm 3.5mm Male	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.497 [12.6] ϕ , 0.776 [19.7] L	Inch [mm]
Net Weight	9.8	g

FMSC1002 3.5mm Female Short Specifications



Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 8500		MHz
Impedance		50		Ohm
Phase, DC-3000 MHz	0.8	Nominal	0.8	Degrees
Phase, 3001 - 8500 MHz	1	Nominal	1	Degrees

Mechanical Specifications

Item	Description	Units
Housing	Phosphor Bronze	
Connector	50 Ohm 3.5mm Female	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.497 [12.6] ϕ , 0.918 [23.3] L	Inch [mm]
Net Weight	13.6	g

FMSC1003 3.5mm Male Short Specifications



Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 8500		MHz
Impedance		50		Ohm
Phase, DC-3000 MHz	0.8	Nominal	0.8	Degrees
Phase, 3001 - 8500 MHz	1	Nominal	1	Degrees

Mechanical Specifications

Item	Description	Units
Housing	Phosphor Bronze & Stainless Steel	
Connector	50 Ohm 3.5mm Male	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.497 [12.6] ϕ , 0.965 [24.5] L	Inch [mm]
Net Weight	13.6	g

FMTR1002 3.5mm Female Load Specifications



Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 8500		MHz
Impedance		50		Ohm
Return Loss, DC-3000 MHz	40	42		dB
Return Loss, 3001 - 8500 MHz	36	38		dB

Mechanical Specifications

Item	Description	Units
Housing	Phosphor Bronze	
Connector	50 Ohm 3.5mm Female	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.473 [12] ϕ , 1.004 [25.5] L	Inch [mm]
Net Weight	13	g

FMTR1003 3.5mm Male Load Specifications



Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 8500		MHz
Impedance		50		Ohm
Return Loss, DC-3000 MHz	40	42		dB
Return Loss, 3001 - 8500 MHz	36	38		dB

Mechanical Specifications

Item	Description	Units
Housing	Phosphor Bronze & Stainless Steel	
Connector	50 Ohm 3.5mm Male	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.473 [12] ϕ , 1.052 [26.7] L	Inch [mm]
Net Weight	14	g

FMSC3003 3.5mm Female Through Specifications



Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 8500		MHz
Impedance		50		Ohm
Insertion Loss, DC - 8500 MHz		0.05	0.2	dB
Return Loss, DC - 8500 MHz	30	35		dB

Mechanical Specifications

Item	Description	Units
Housing	Phosphor Bronze	
Connector	50 Ohm 3.5mm Female (Both Ends)	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.355 [9] ϕ , 0.662 [16.8] L	Inch [mm]
Net Weight	2.4	g

FMSC3004 3.5mm Male Through Specifications



Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range		DC - 8500		MHz
Impedance		50		Ohm
Insertion Loss, DC - 8500 MHz		0.05	0.2	dB
Return Loss, DC - 8500 MHz	30	35		dB

Mechanical Specifications

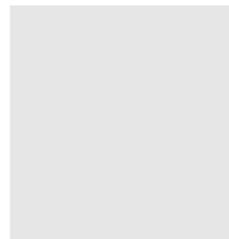
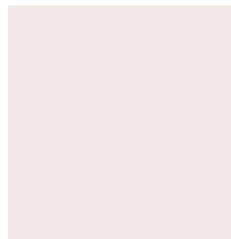
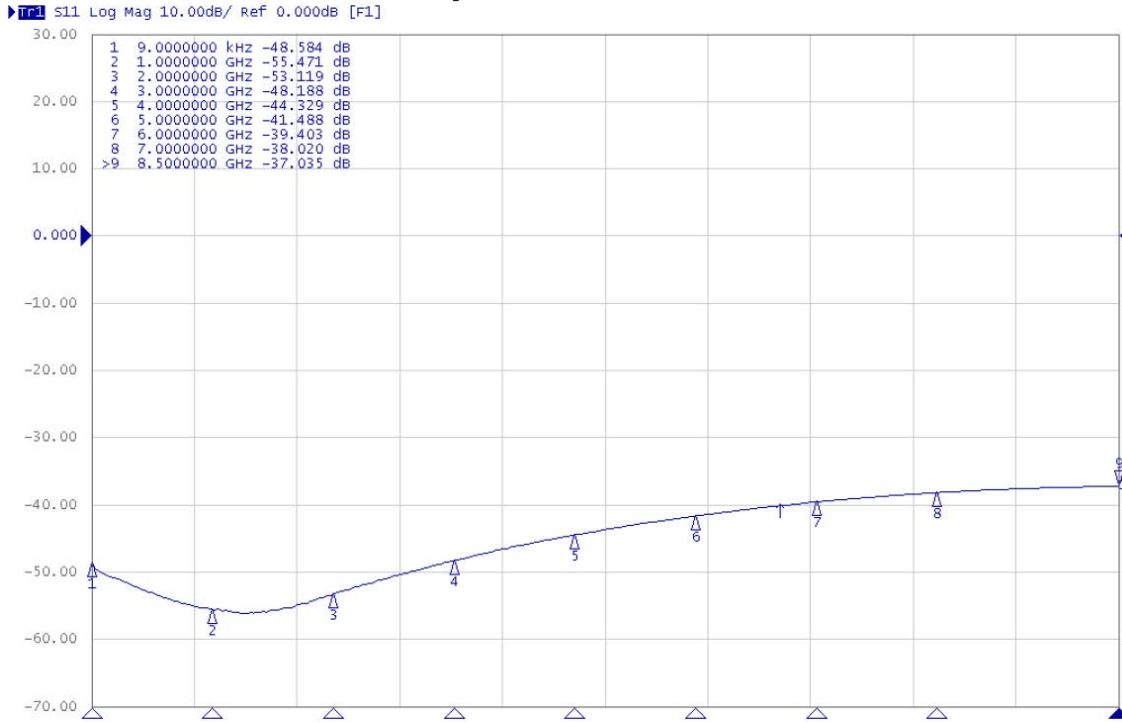
Item	Description	Units
Housing	Stainless Steel	
Connector	50 Ohm 3.5mm Male (Both Ends)	
Connector Screw Thread	1/4"-36 UNS	Inch
Dimensions	0.355 [9] ϕ , 0.808 [20.5] L	Inch [mm]
Net Weight	5.5	g

General Instructions and Usage Notes

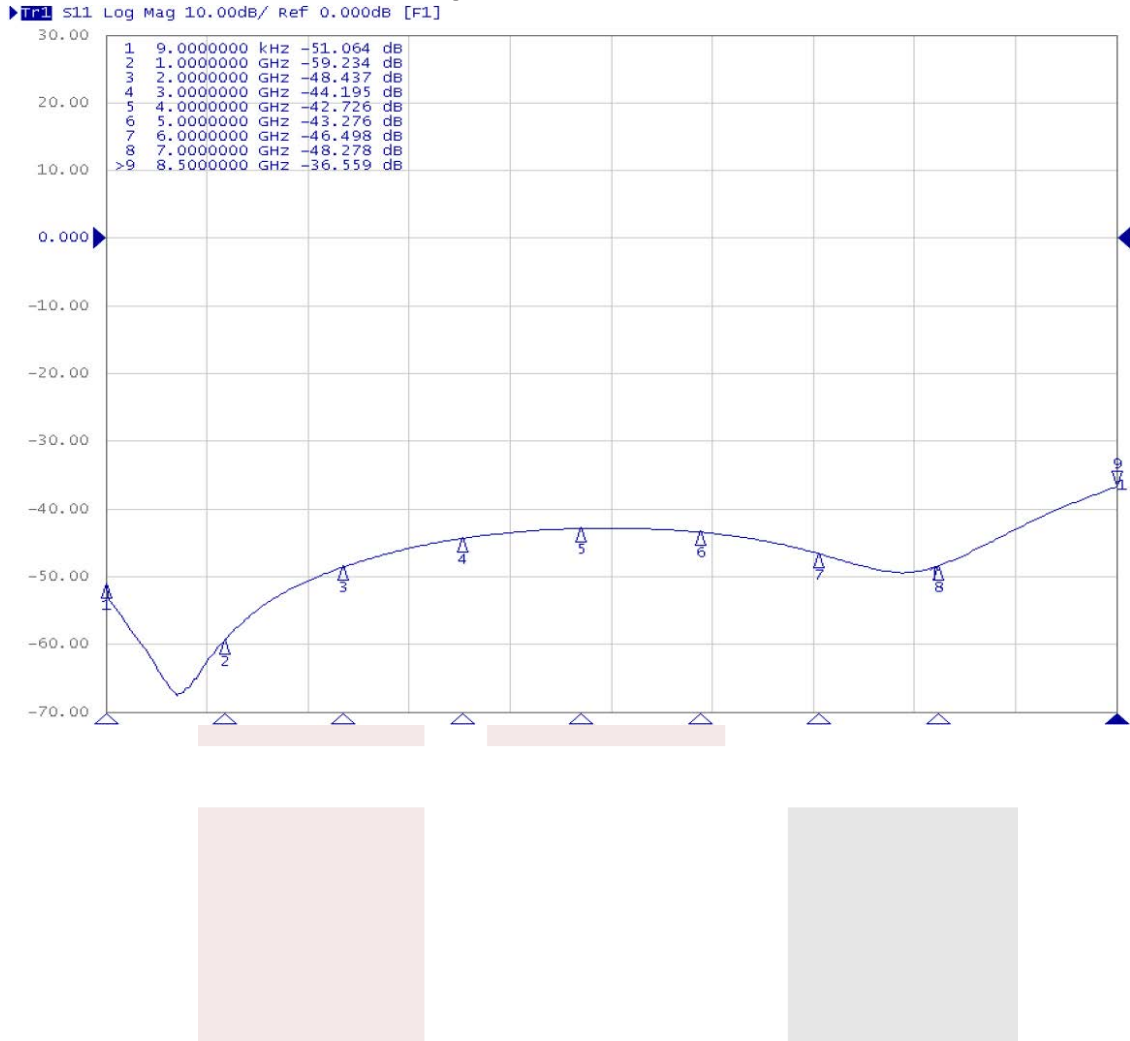
#	Notes
1	Keep provided protective red caps installed when not in use.
2	Store in climate controlled environment.
3	Always keep connectors clean.
4	Avoid touching the connector interface.
5	Use caution when handling.
6	For female components, do not insert male pin greater than 0.037" [.94 mm]. Failure 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.
11	Torque wrench provided is intended for 3.5mm connector types and is calibrated to 8 in-lbs.

Typical Performance Data

FMTR1002 Return Loss
Span: 8.5 GHz

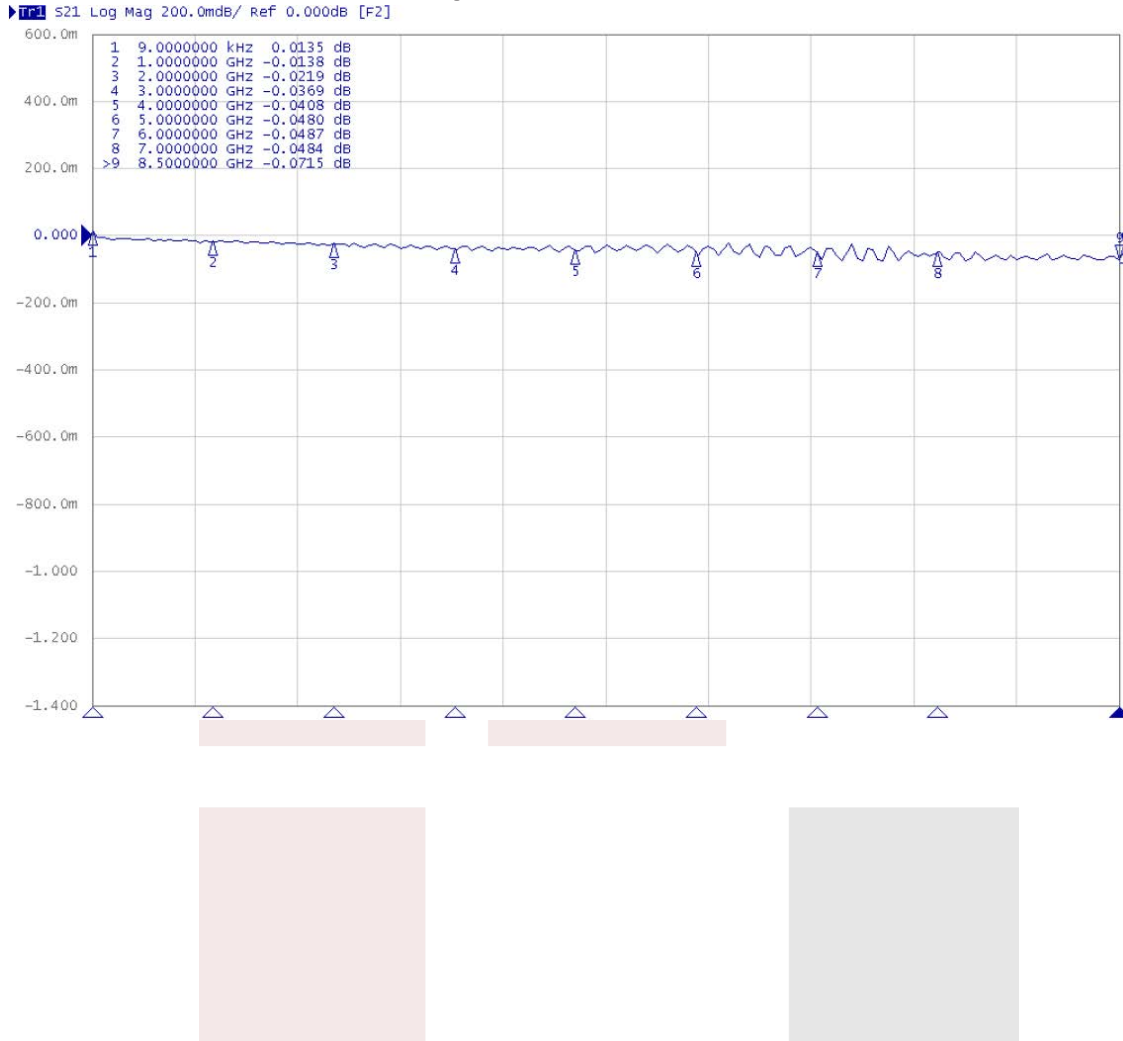


FMTR1003 Return Loss
Span: 8.5 GHz

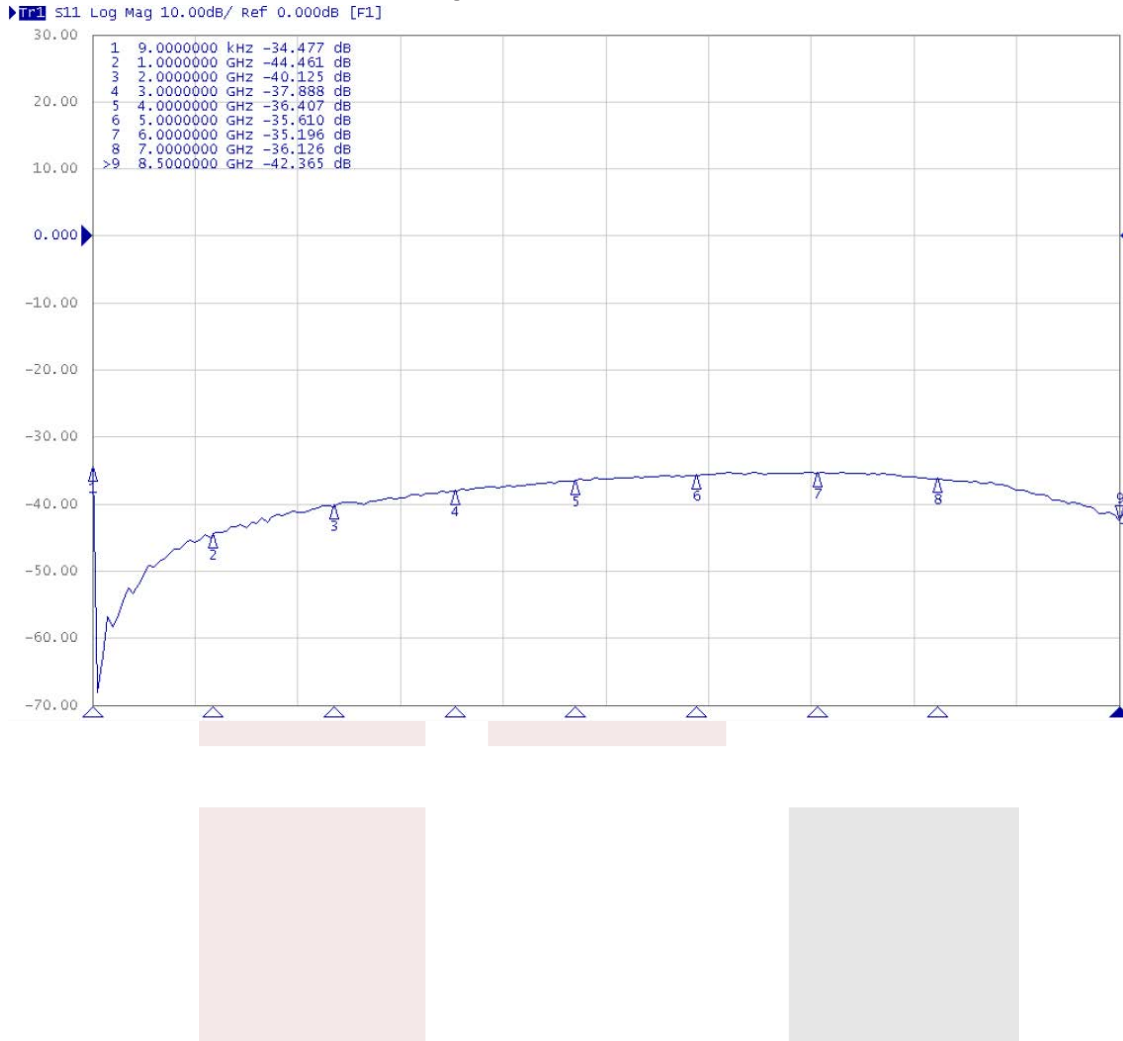


FMSC3003 Insertion Loss

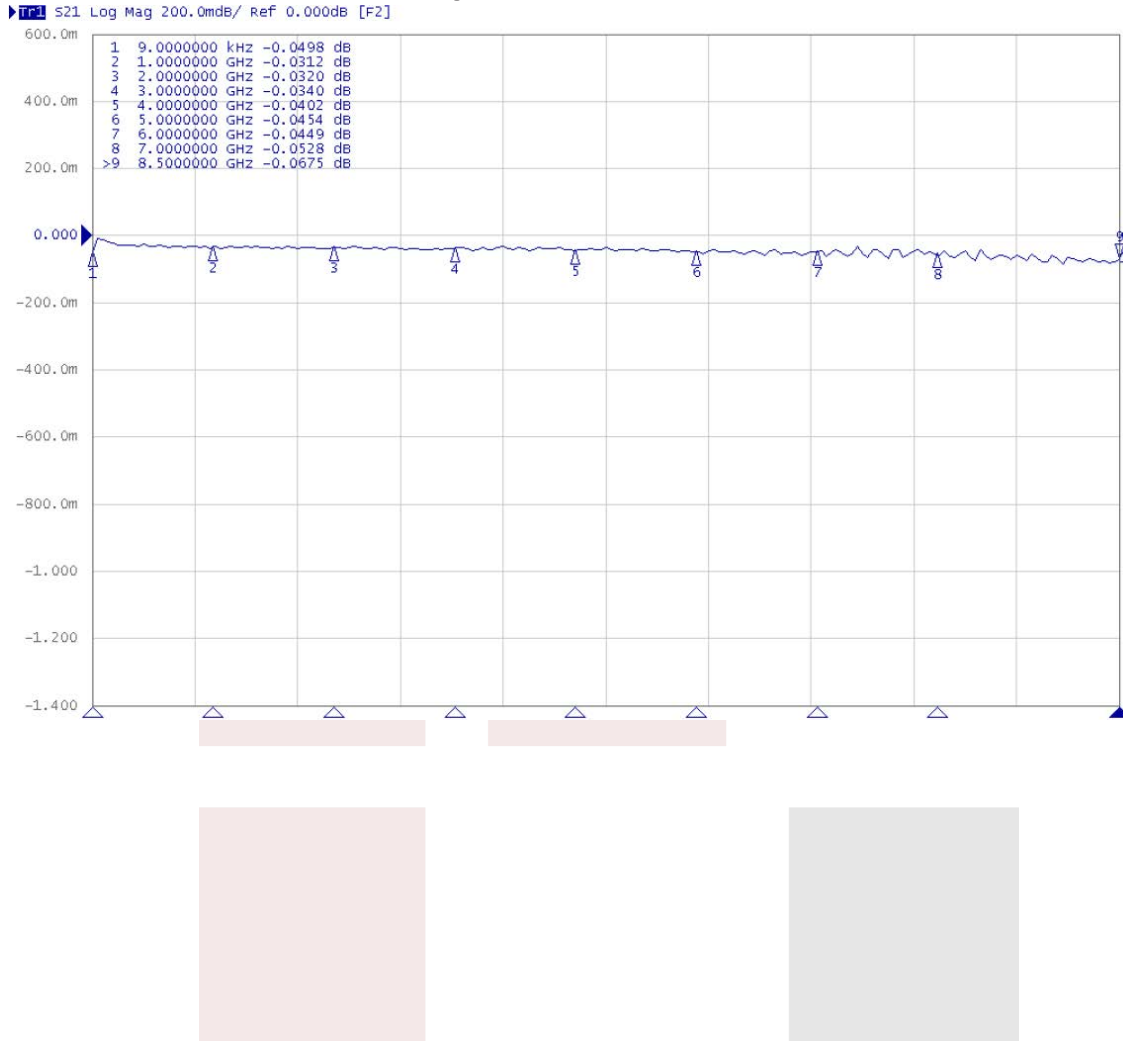
Span: 8.5 GHz



FMSC3003 Return Loss
Span: 8.5 GHz

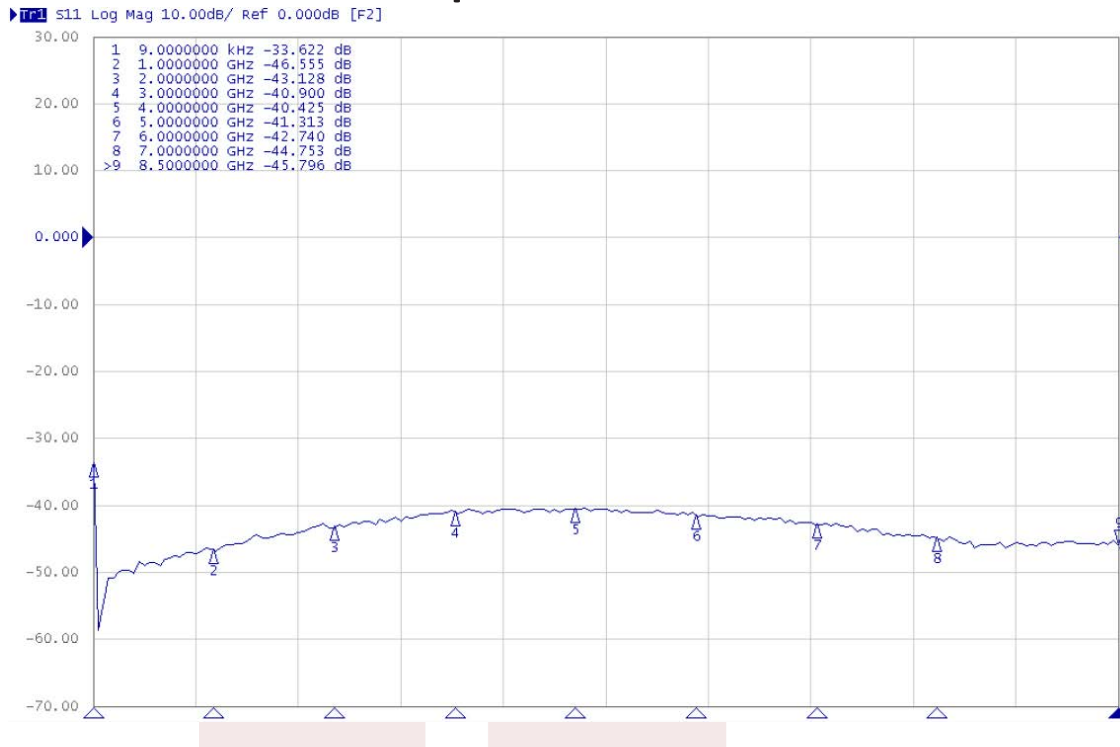


FMSC3004 Insertion Loss
Span: 8.5 GHz



FMSC3004 Return Loss

Span: 8.5 GHz



Compliance Certifications (visit www.FairviewMicrowave.com for current document)

RoHS Compliant	Yes
REACH Compliant	06/16/2014

Plotted and Other Data

- Notes:
- Values at 25 °C, sea level

3.5mm Calibration Kit for General Purpose Includes Short Circuit, Open Circuit, Load and Thru Components Up to 8.5 GHz 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 Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [3.5mm Calibration Kit for General Purpose Includes Short Circuit, Open Circuit, Load and Thru Components Up to 8.5 GHz FMCK1001](http://www.fairviewmicrowave.com/open-short-load-calibration-kit-type-3.5mm-8.5-ghz-fmck1001-p.aspx)

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