FLEX TEST™

Test Cable

CBL-1MFM-75+

75Ω 1M DC to 3000 MHz F-Type Male

THE BIG DEAL

- RoHS compliant
- Wideband coverage, DC to 3000 MHz
- Extra rugged construction with strain relief for longer life
- Stainless steel F-Male connectors for long mating-cycle life
- Useful over temperature range, -55°C to 105°C
- Triple shield cable for excellent shielding effectiveness
- Flexible for easy connection & bend radius
- 6 month guarantee*

Generic photo used for illustration purposes only

Model No.	CBL-1MFM-75+
Case Style	ND1919-3.28
Connectors	F-Type Male

+RoHS Compliant
The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

Product Guarantee*
Mini-Circuits® will repair or replace your test cable at its option if the connector attachment fails within six months of shipment. This guarantee excludes cable or connector interface damage from misuse or abuse.

APPLICATIONS

- High volume production test stations
- Research & development labs
- Environmental & temperature test chambers
- Replacement for OEM test port cables
- Field RF testing

PRODUCT OVERVIEW

Mini-Circuits CBL-FM-75+ series 75Ω test cables provide extra rugged durability and flexibility for easy connections and long life in test environments. These cables support 75Ω test applications from DC to 3000 MHz and provide outstanding return loss and low insertion loss across their full frequency range with power handling up to 338W. They're performance qualified up to 20,000 flex cycles and feature triple-shielded cable construction with F-type (M) to F-type (M) connectors. Available in a variety of lengths.

KEY FEATURES

Feature	Advantages
Wideband, DC to 3000 MHz	Wide frequency range covers many applications.
High Power Handling: • 338W @ 0.5 GHz • 98W @ 3 GHz	High power handling makes CBL test cables suitable for applications with a wide range of requirements.
Excellent Return Loss and Low Insertion Loss	Well matched for 75Ω systems across the entire frequency band.
Extra rugged, triple shield cable construction	CBL-FM-75+ test cables provide outstanding durability, flexibility, and shielding effectiveness.
Passivated stainless steel F-Male connectors	Long connector mating cycle life.
Superior stability of Insertion Loss and Return Loss	Reliable performance in almost any test layout configuration.

REV. B
ECO-022579
CBL-1MFM-75+
MCL NY
240730

Test Cable

CBL-1MFM-75+

75Ω 1M DC to 3000 MHz F-Type Male

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency range		DC		3000	MHz
Length[1]			1		M
Insertion Loss	DC - 500	—	0.32	0.53	dB
	500 - 1000	—	0.49	0.69	
	1000 - 2000	—	0.78	0.92	
	2000 - 3000	—	0.89	1.11	
Return Loss	DC - 500	26	37	—	dB
	500 - 1000	26	32	—	
	1000 - 2000	24	32	—	
	2000 - 3000	22	24.3	—	

1. Custom sizes available, consult factory.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-55°C to +105°C
Storage Temperature	-55°C to +105°C
Power Handling at +25°C, Sea Level	338 W Max. at 0.5 GHz 210 W Max. at 1 GHz 143 W Max. at 2 GHz 98 W Max. at 3 GHz

Permanent damage may occur if any of these limits are exceeded.

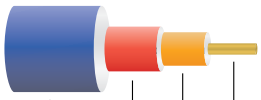
FLEX TEST™

Test Cable

CBL-1MFM-75+

75Ω 1M DC to 3000 MHz F-Type Male

CABLE CONSTRUCTION



Inner Conductor: Solid Silver Plated Copper Clad Steel

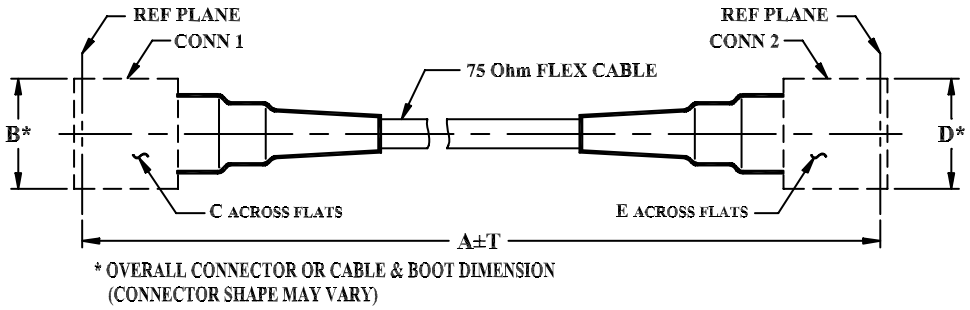
Dielectric: Solid PTFE

Shield: Silver-Plated Copper Flat Ribbon Braid
Aluminum-Polymide Tape Interlayer 36 GA
Silver-Plated Copper Braid (90%k)

Jacket: Blue FEP

Connectors:
- Passivated stainless steel
- Captive contact
- Thick wall interface (SMA)
- Gold plated beryllium copper center contacts
- PTFE dielectric

OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch / mm)

A	B	C	D	E	T	wt
3.28	.54	.500	.54	.500	.10	grams
1.00	13.72	12.70	13.72	12.70	0.03	125.0

FLEX TEST™

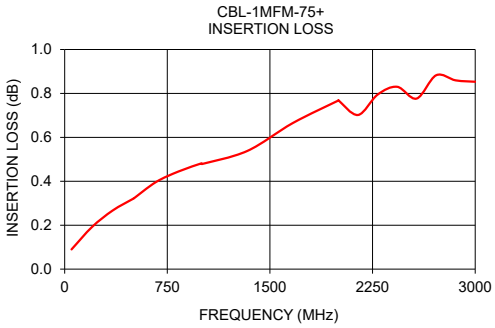
Test Cable

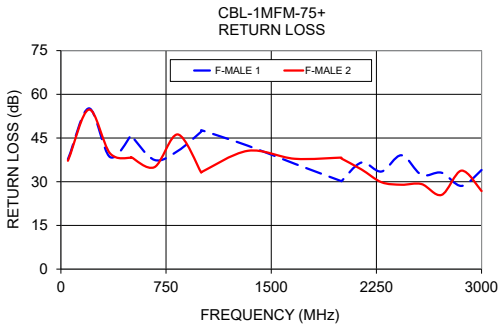
CBL-1MFM-75+

75Ω 1M DC to 3000 MHz F-Type Male

TYPICAL PERFORMANCE DATA

Frequenc (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		F-Male	F-Male
50	0.09	37.70	37.20
200	0.19	55.18	54.77
500	0.32	45.86	38.18
667	0.40	37.47	35.00
834	0.45	40.56	46.23
1000	0.48	47.16	33.18
1334	0.54	42.35	40.62
1667	0.67	36.17	37.88
2000	0.77	30.21	38.28
2286	0.79	33.50	29.83
2429	0.83	39.08	28.97
2572	0.78	32.33	29.20
2715	0.88	33.09	25.47
2857	0.86	28.56	33.82
3000	0.85	34.02	26.79





NOTES

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

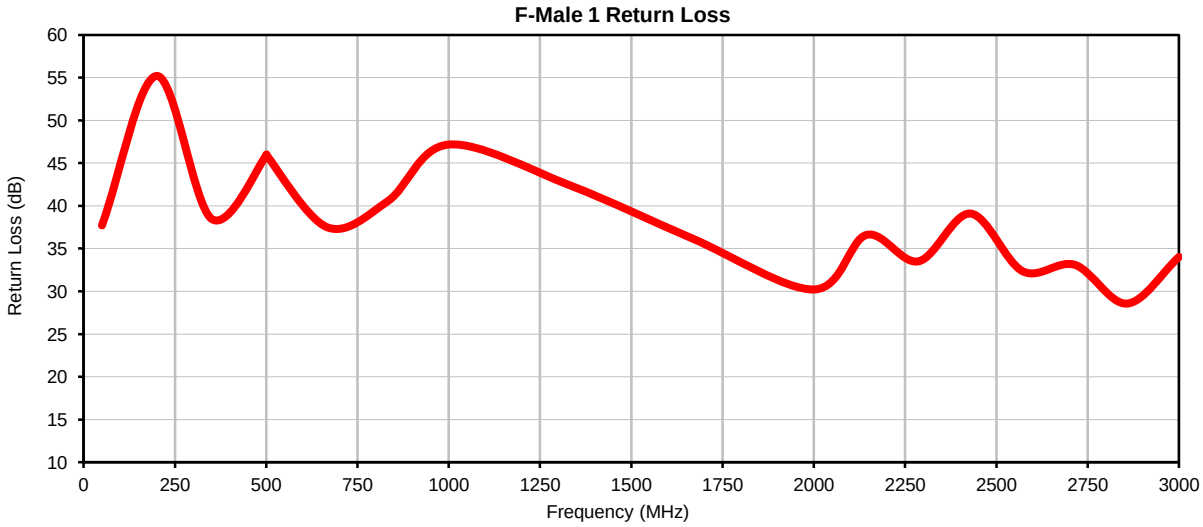
Flex Test, 75-Ohm Test Cable, F-Male/F-Male CBL-1MFM-75+

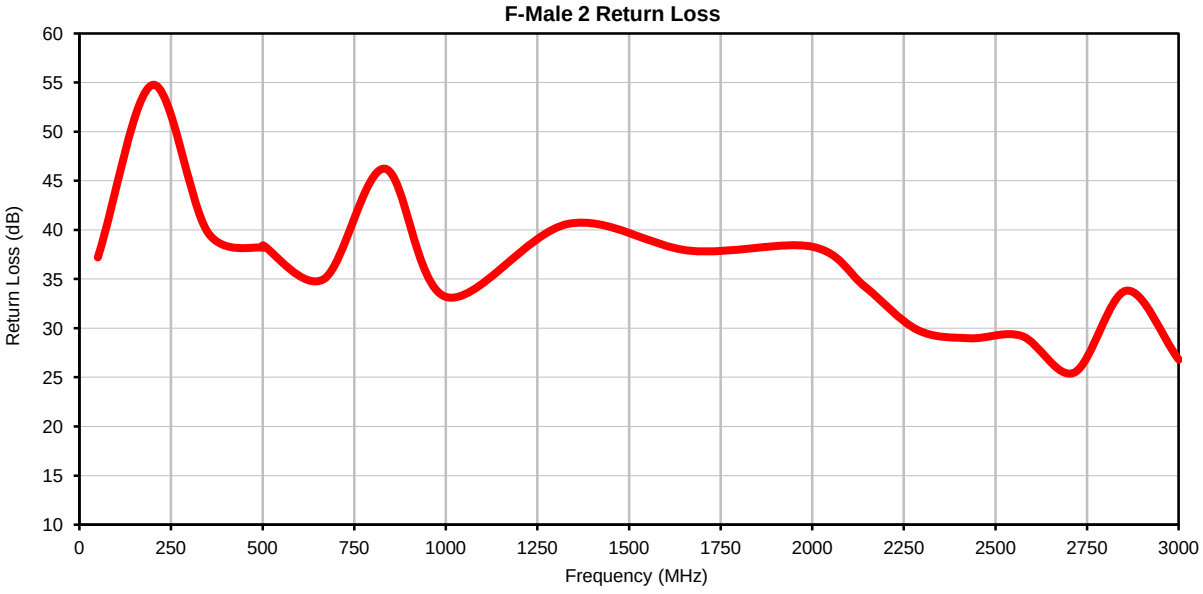
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	F-MALE 1 RETURN LOSS (dB)	F-MALE 2 RETURN LOSS (dB)
50.0	0.09	37.7	37.2
200.0	0.19	55.2	54.8
350.0	0.27	38.5	39.8
500.0	0.32	45.9	38.2
500.3	0.32	45.7	38.2
500.7	0.32	46.0	38.4
501.0	0.32	45.9	38.4
667.3	0.40	37.5	35.0
833.7	0.45	40.6	46.2
1000.0	0.48	47.2	33.2
1334.0	0.54	42.3	40.6
1667.0	0.67	36.2	37.9
2000.0	0.77	30.2	38.3
2143.7	0.70	36.6	34.2
2286.4	0.79	33.5	29.8
2429.1	0.83	39.1	29.0
2571.9	0.78	32.3	29.2
2714.6	0.88	33.1	25.5
2857.3	0.86	28.6	33.8
3000.0	0.85	34.0	26.8

Flex Test, 75-Ohm Test Cable, F-Male/F-Male CBL-1MFM-75+

Typical Performance Curves

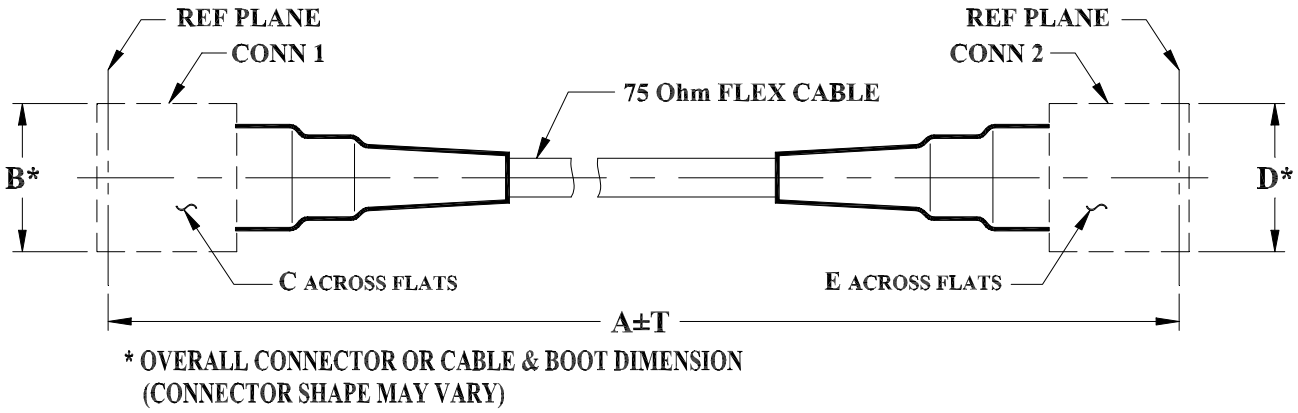




Case Style ND

ND1919

Outline Dimensions



ND1919 SERIES
F MALE 75 Ohm (CONN-1)
F MALE 75 Ohm (CONN-2)

CASE STYLE #	A		B	C	D	E	T		WEIGHT GRAMS
	FEET	METERS					FEET	METERS	
ND1919-2	2.00	.61	.54 (13.72)	.500 (12.70)	.54 (13.72)	.500 (12.70)	.06	.02	91
ND1919-3	3.00	.91					.09	.03	110
ND1919-3.28	3.28	1.00					.10	.03	116
ND1919-6	6.00	1.83					.18	.05	168

Unless otherwise specified dimensions are in inches (mm).
Tolerances: 2Pl. ± .03; 3Pl. ± .015

Note:
1. 75 Ohm Flexible Coaxial Cable.

Mini-Circuits®
INTERNET http://www.minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010
Mini-Circuits ISO 9001 & ISO 14001 Certified

Mini-Circuits

Environmental Specifications ENV34

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 105°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 105°C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 105°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except -105°C
Mechanical Flexing	20,000 cycles During each cycle, cable flexed from 90° through 0° to -90° and back with a Radii of 3 inches	- - -