



# 75 $\Omega$ Test Cable

## CBL-FM-75+ Model Series

F-Conn DC to 3000 MHz

### The Big Deal

- Wideband, DC to 3000 MHz
- Excellent Return Loss
- Performance Qualified to 20,000 Flexures



CASE STYLE:: ND1919

XX= cable length in inches

### Product Overview

Mini-Circuits CBL-FM-75+ series 75 $\Omega$  test cables provide extra rugged durability and flexibility for easy connections and long life in test environments. These cables support 75 $\Omega$  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: <ul style="list-style-type: none"><li>• 338W @ 0.5 GHz</li><li>• 98W @ 3 GHz</li></ul> | High power handling makes CBL test cables suitable for applications with a wide range of requirements. |
| Excellent return loss and low insertion loss (varies with length)                                           | Well matched for 75 $\Omega$ 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.                                          |

#### 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/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)





# 75Ω Test Cable

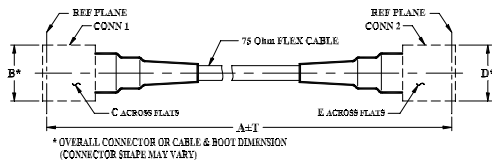
F-Conn 2FT DC to 3000 MHz

## Maximum Ratings

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

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

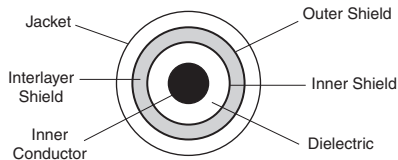
## Outline Drawing



## Outline Dimensions (inch/mm)

| A    | B     | C     | D     | E     | T    | wt    |
|------|-------|-------|-------|-------|------|-------|
| 2.00 | .54   | .500  | .54   | .500  | .06  | grams |
| 0.61 | 13.72 | 12.70 | 13.72 | 12.70 | 0.02 | 100.0 |

## Cable Cross Section



### Cable Construction

|                 |                                                                                                                   |
|-----------------|-------------------------------------------------------------------------------------------------------------------|
| Inner Conductor | Solid Silver Plated Copper Clad Steel                                                                             |
| Dielectric      | Solid PTFE                                                                                                        |
| Shield          | Silver-Plated Copper Flat Ribbon Braid<br>Aluminum-Polyimide Tape Interlayer<br>Silver-Plated Copper Braid (90%k) |
| Jacket          | Blue FEP                                                                                                          |

### Connectors

- passivated stainless steel
- gold plated beryllium copper center contacts
- PTFE dielectric

## 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.

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## Features

- 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\*

## Applications

- high volume production test stations
- research & development labs
- environmental & temperature test chambers
- replacement for OEM test port cables
- field RF testing

## CBL-2FM-75+



CASE STYLE: ND1919-2

| Connectors |        | Model       |
|------------|--------|-------------|
| Conn1      | Conn2  |             |
| F-MALE     | F-MALE | CBL-2FM-75+ |

## +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

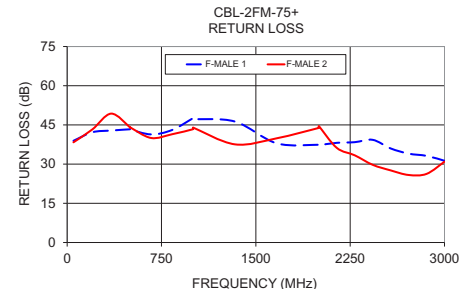
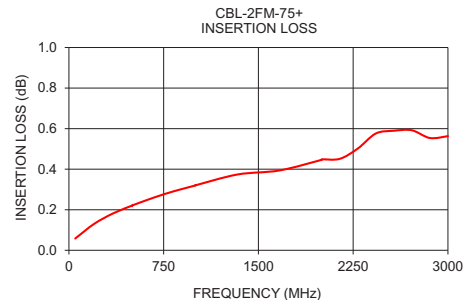
## Electrical Specifications at 25°C

| Parameter           | Condition (MHz) | Min. | Typ. | Max. | Unit |
|---------------------|-----------------|------|------|------|------|
| Frequency Range     |                 | DC   |      | 3000 | MHz  |
| Length <sup>1</sup> |                 | 2    |      |      | FT   |
| Insertion Loss      | DC - 500        | —    | 0.22 | 0.42 | dB   |
|                     | 500 - 1000      | —    | 0.32 | 0.53 |      |
|                     | 1000 - 2000     | —    | 0.45 | 0.69 |      |
|                     | 2000 - 3000     | —    | 0.61 | 0.82 |      |
| Return Loss         | DC - 500        | 26   | 38   | —    | dB   |
|                     | 500 - 1000      | 26   | 38   | —    |      |
|                     | 1000 - 2000     | 23   | 34   | —    |      |
|                     | 2000 - 3000     | 23   | 25   | —    |      |

1. Custom sizes available, consult factory.

## Typical Performance Data

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) |        |
|-----------------|---------------------|------------------|--------|
|                 |                     | F-MALE           | F-MALE |
| 50              | 0.06                | 38.92            | 38.34  |
| 200             | 0.13                | 42.19            | 43.27  |
| 500             | 0.22                | 43.34            | 44.01  |
| 667             | 0.26                | 41.37            | 39.99  |
| 834             | 0.29                | 43.04            | 41.43  |
| 1000            | 0.32                | 47.55            | 43.35  |
| 1334            | 0.37                | 46.28            | 37.56  |
| 1667            | 0.39                | 37.93            | 39.89  |
| 2000            | 0.45                | 37.41            | 43.84  |
| 2286            | 0.50                | 38.40            | 33.36  |
| 2429            | 0.58                | 39.29            | 29.73  |
| 2572            | 0.59                | 36.00            | 27.59  |
| 2715            | 0.59                | 34.01            | 25.84  |
| 2857            | 0.55                | 33.16            | 26.25  |
| 3000            | 0.56                | 31.27            | 30.95  |



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