

# InstaBend® 047

High Performance Microwave Assemblies



InstaBend® 047 are flexible coaxial microwave assemblies designed for interconnects between RF circuit cards, medical equipment, and enclosure panels. This cable's low profile and flexure allows for bending close behind the connector which simplifies cable routing. IB-047 assemblies are available in a variety of lengths and connector types, making them a versatile solution for a wide range of applications.

## Features

- Readily Available
- Low-profile bending close to the connector back-end for minimal footprint
- Lightweight

## Specifications

 Impedance  
50 Ohms

 Op Temp  
-85 to +257°F  
-65 to +125°C

### Units

Diameter	in (mm)	0.061 (1.55)
Weight	lb/ft (g/m)	0.004 (6.0)
Minimum Bend Radius	in (mm)	0.130 (3.30)
Maximum Frequency	GHz	50
Maximum Operating Voltage	VACrms	100
Capacitance	pF/ft (pF/m)	29.9 (98.1)
Delay	ns/ft (ns/m)	1.45 (4.76)
Shielding	dBc	-90

### CENTER CONDUCTOR

Silver Plated Copper

### DIELECTRIC

PTFE

### SHIELD

Silver Plated Copper  
Clad Steel

### OUTER BRAID

Silver Plated  
Copper Clad Steel

### JACKET

Blue FEP

## Calculation

$$IL = (K1 \times v(f) + K2 \times f) \times \text{Cable Length} + \text{Connector Loss} \rightarrow \text{Typical Connector Loss}$$

Cable Insertion Loss  
f = Frequency (MHz)

Use K values with  
matching length unit



K values

dB/ft

dB/m

K1	0.01195	0.03920795
K2	0.000013	0.000042653

Frequency  
(MHz)

dB/pr

500	0.04	6000	0.15	14000	0.22
1000	0.06	8000	0.17	16000	0.24
2000	0.08	10000	0.19	18000	0.25
4000	0.12	12000	0.21		

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## Connectors

	Code	Part-Number	Stock Code	Description	VSWR max
	KM	IB-047-KM	47425	2.92 mm, male, straight	1.35 @ DC-12.4 GHz 1.50 @ 12.4- 18 GHz
	SM	IB-047-SM	47396	SMA, male, straight	1.20 @ DC-6.0 GHz 1.35 @ 6.0-26.5 GHz
	SMPF	IB-047-SMPF	47432	SMP, female, straight	1.20 @ DC-6.0 GHz 1.35 @ 6.0-26.5 GHz 1.40 @ 26.5-40.0 GHz

## Ordering Guide

IB047

Cable  
Code

-XXX

Connector A  
Code

XXX-

Connector B  
Code

XX.X

Length

X

Units of measure:

I = Inches, F = Feet, CM= centimeters, M = Meters



Global manufacturing capability:  
US, Asia, and India.



Assembled and tested assemblies  
provide assured performance.

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