

INSTABEND™ 047

HIGH PERFORMANCE MICROWAVE ASSEMBLIES

INSTABEND™ are flexible, coaxial microwave assemblies designed for interconnects between RF circuit cards, modules and enclosure panels. The cable can be bent very closely behind the connector, simplifying cable routing.

Cable Specifications

	Units	
Diameter	in (mm)	0.061 (1.55)
Weight	lb/ft (kg/m)	0.005 (0.007)
Minimum Bend Radius	in(mm)	0.13 (3.30)
Operating Temperature	°F	-85 to 257
	°C	-65 to 125
Maximum Frequency	GHz	110
Maximum Operating Voltage	VACrms	100
Impedence	ohms	50
Velocity of Propagation	%	70
Capacitance	pF/ft (pF/m)	29.9 (98.1)
Delay	ns/ft (ns/m)	1.45 (4.76)
Shielding	dBc	-90

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

Cable Insertion Loss

Length unit must match K value unit.

K Values

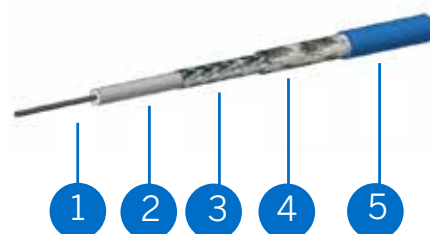
	dB/ft	dB/m
K1	0.011950	0.0392
K2	0.00001280	0.0000420
f= Frequency in MHz		

Loss Per Pair

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

FEATURES

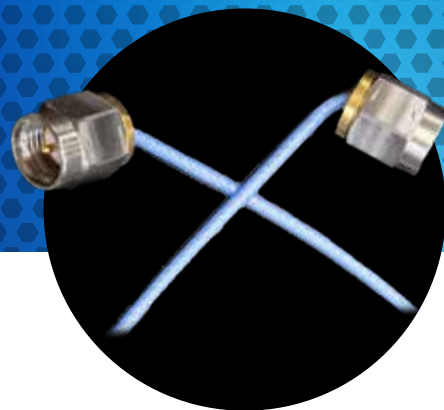
- Readily Available
- Extreme bending from the back of the connector for minimal footprint



- 1 Center Conductor**
Silver Plated Copper Clad Steel
- 2 Dielectric**
PTFE
- 3 Shield**
Silver Plated Copper Clad Steel
- 4 Outer Braid**
Silver Plated Copper Clad Steel
- 5 Jacket**
Blue FEP

INSTABEND™ 047

HIGH PERFORMANCE MICROWAVE COAXIAL CABLE



Ordering Guide

IB047- SM SM-10.0 CM

CONNECTOR A

CONNECTOR B

LENGTH

UNITS OF MEASURE
CM CENTIMETERS
IN INCHES

USE ABBREVIATIONS FROM THE CHART BELOW.

Abbreviation	Part Number	Description	VSWR max
SMPF	47432	SMP female Straight	1.35 @ DC-12.4 GHz 1.50 @ 12.4- 18 GHz
SM	47396	SMA male Straight	1.25 @ DC-27 GHz
KM	47425	2.92 male Straight	1.25 @ DC-27 GHz 1.40 @ 27- 40 GHz



Heritage—in
the air and on
the ground,
thousands of
assemblies built
over decades



Global manufacturing
capability:
US, and Asia.



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assemblies provide
assured performance

WORLD HEADQUARTERS

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1-800-867-2629

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HIGH PERFORMANCE MICROWAVE ASSEMBLIES

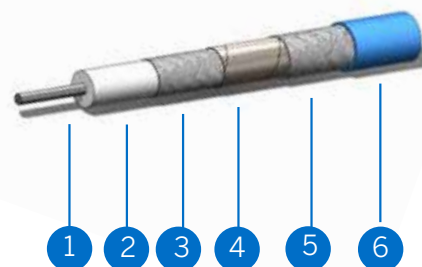
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FEATURES

- **Readily Available**
- **Extreme bending from the back of the connector for minimal footprint**

Cable Specifications

	Units	
Diameter	in (mm)	0.10 (2.67)
Weight	lb/ft (kg/m)	0.01 (0.02)
Minimum Bend Radius	in(mm)	0.3 (6.4)
Operating Temperature	F°	-76 to 257
	C°	-60 to 125
Maximum Frequency	GHz	62
Maximum Operating Voltage	VAC _{rms}	100
Impedance	ohms	50
Velocity of Propagation		70%
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 Clad Steel
- Dielectric**
PTFE
- Shield**
Silver Plated Copper Braid
- Interlayer**
Metalized Polyester Tape
- Outer Braid**
Silver Plated Copper Clad Steel
- Jacket**
Blue FEP

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

Cable Insertion Loss

K Values

	dB/ft	dB/m
K1	0.00666	0.0218
K2	0.00001279	0.0000419

f= Frequency in MHz

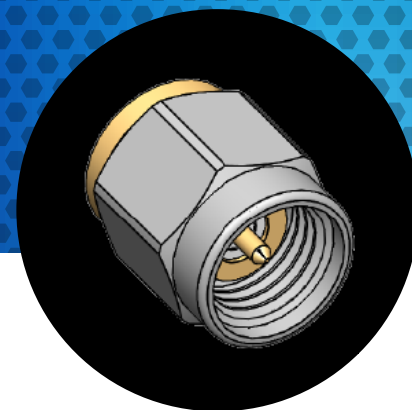
Length unit must match K value unit.

Loss Per Pair

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

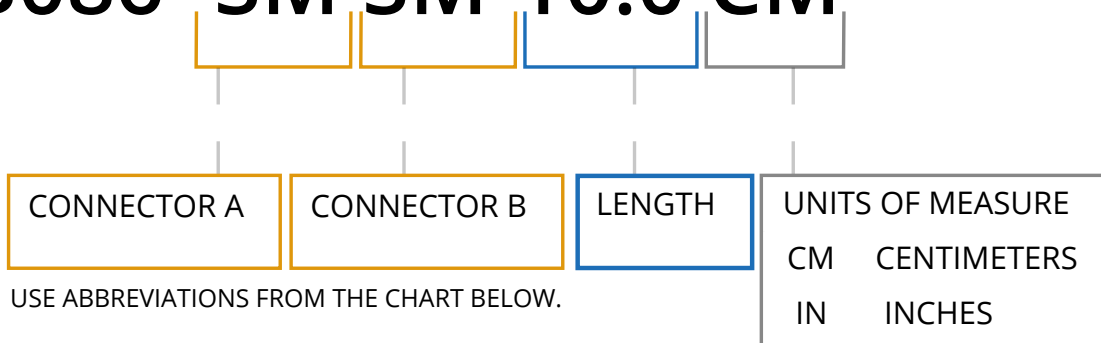
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HIGH PERFORMANCE MICROWAVE COAXIAL CABLE



Ordering Guide

IB086- SM SM-10.0 CM



Abbreviation	Part Number	Description	VSWR max
SMPF	47389	SMP female Straight	1.35 @ DC-12.4 GHz 1.50 @ 12.4- 18 GHz
SM	47388	SMA male Straight	1.25 @ DC-27 GHz
KM	47393	2.92 male Straight	1.25 @ DC-27 GHz 1.40 @ 27-40 GHz



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