

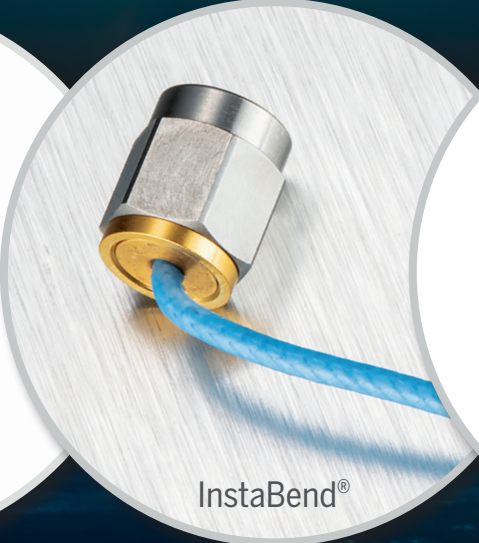


Commercial Space

APPLICATIONS



MaxGain®



InstaBend®



InstaBend®
PhaseStable

TABLE OF CONTENTS

Index

PAGE:

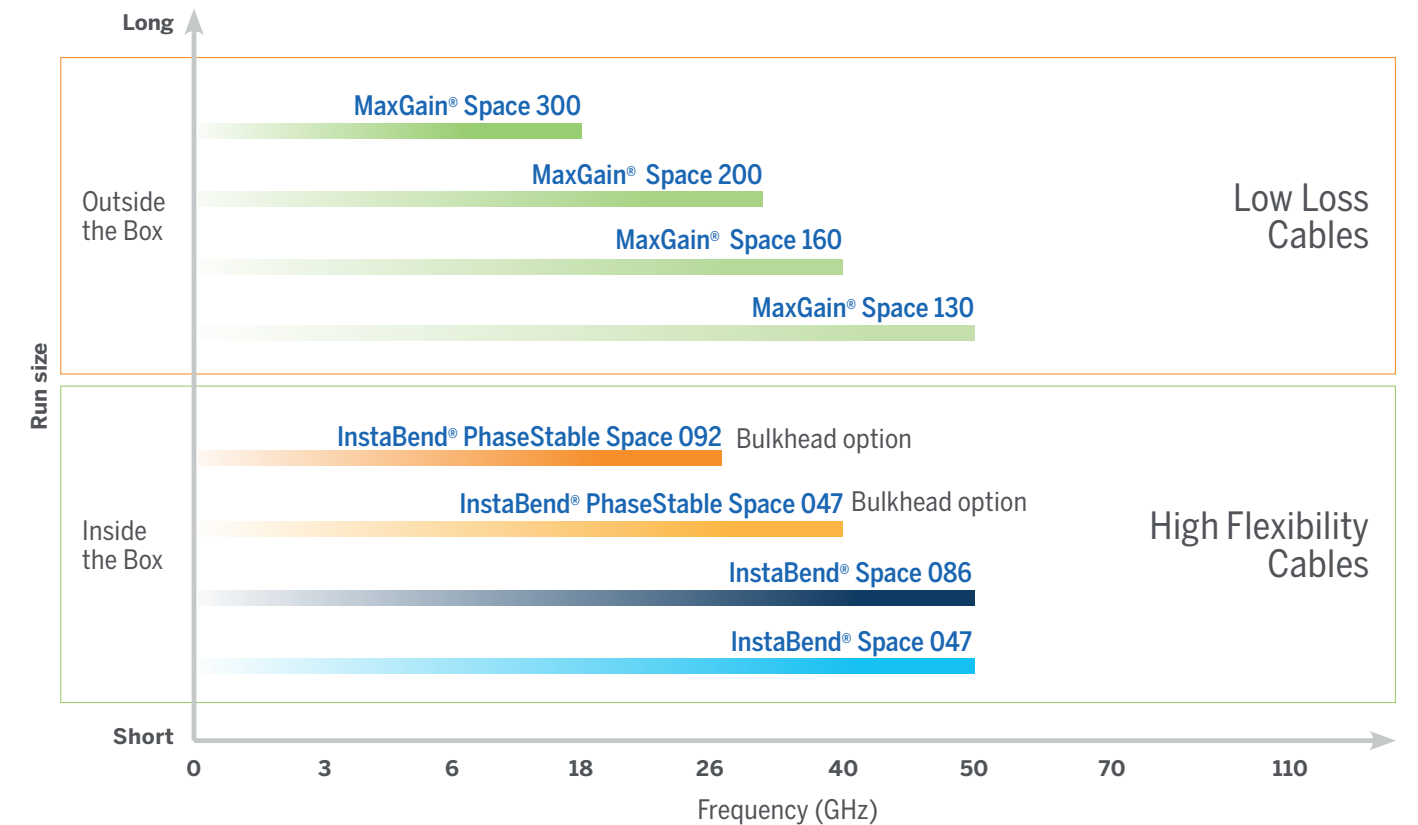
3	Cable Selection Guide
4	MaxGain® Space 130
6	MaxGain® Space 160
8	MaxGain® Space 200
10	MaxGain® Space 300
12	InstaBend® Space 047
14	InstaBend® Space 086
16	InstaBend® PhaseStable Space 047
18	InstaBend® PhaseStable Space 092

Space Assembly comparison chart

Space Assembly Type	Abbreviation	Max. Frequency	Connector
MaxGain® Space Assemblies	MGS-130	50	SP014
	MGS-160	40	SP029
			SP007
	MGS-200	30	SP013
SP018			
MGS-300	18	SP052	
		SP121	
InstaBend® Space Assemblies	IBS-047	50	SP112
			SP120
	IBS-086	50	SP110
SP107			
InstaBend® PhaseStable Space Assemblies	IBPS-047	40	SP133
			SP149
			SP116
	IBPS-092	40	SP129
			SP150

Cable Assembly Guide

Selecting the correct assembly for the right application is not always an easy task. Below are some considerations when selecting RF test assemblies.



- Radiation environment: 30 Mrads
- Temperature Range: -90C+150C
- Clean Room manufacturing
- CofC
- T-VAC compatible
- Low outgassing per ASTM E595: TML ≤1% and CVCM ≤0.01%
- 100% visual inspection
- Baseline electricals performance (IL, VSWR)
- Space heritage available on request

Rev.2: 3/6/2023

MaxGain® 130

High Performance Microwave Cable Assemblies



MaxGain® Assemblies are high-performance, ultra-low-loss microwave coaxial cables. Built with our unique spiral outer conductor technology, this light-weight cable is a reliable, high frequency interconnect solution.

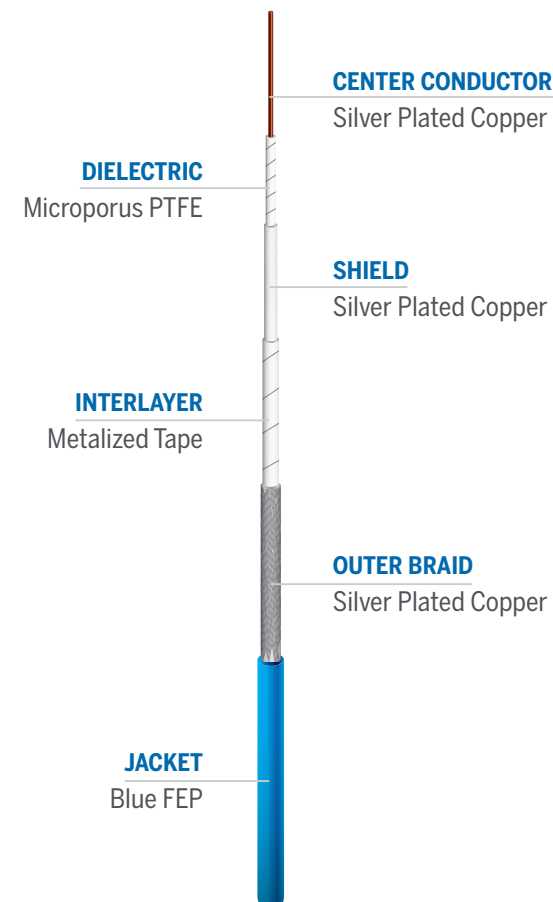
Features

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads

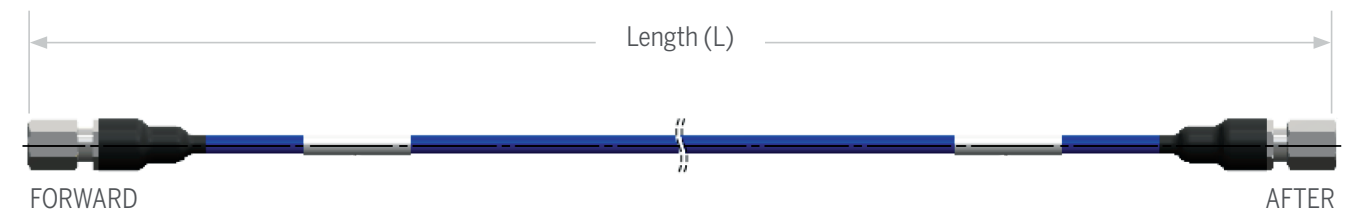
Specifications

Impedance 50 Ohms
 Op Temp -67 to +302°F
-55 to +150°C

	Units	
Diameter	in (mm)	0.130 (3.30)
Weight	lb/ft (g/m)	0.018 (27)
Minimum Bend Radius	in (mm)	0.625 (16)
Maximum Frequency	GHz	53
Velocity of Propagation	%	80
Capacitance	pF/ft (pF/m)	25.4 (83.3)
Delay	ns/ft (ns/m)	1.27 (4.17)
Shielding	dB	>90



Ordering Guide



MGS130 - **SP014** **SP014-** **XX.X** **MM**
 Forward Connector After Connector Length Units of measure
 MM - Millimeters

Calculation

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

Cable Insertion Loss
 $f = \text{Frequency (MHz)}$
 Use **K** values with
 matching length unit

K values	dB/ft	dB/m
K1	0.437597	1.435756
K2	0.000146	0.000479

Insertion loss & VSWR @ 50GHz

Stock Code	Max. Insertion Loss in dB	Max. VSWR
IE-00406-01	1.87	1.40
IE-00406-02	2.64	1.40
IE-00406-03	4.62	1.40
IE-00406-04	6.60	1.40

Stock Code	Part-Number	Length (L) in mm
IE-00406-01	MGS130-2.4M2.4M-0.3M	300
IE-00406-02	MGS130-2.4M2.4M-0.5M	500
IE-00406-03	MGS130-2.4M2.4M-1.0M	1000
IE-00406-04	MGS130-2.4M2.4M-1.5M	1500

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP014	Type 2.4mm (M) Straight	Stainless Steel, Passivated	Beryllium Copper, Gold Plated	0.08 x v _f (GHz)

Rev.2: 3/6/2023

MaxGain® 160

High Performance Microwave Cable Assemblies



MaxGain® Assemblies are high-performance, ultra-low-loss microwave coaxial cables. Built with our unique spiral outer conductor technology, this light-weight cable is a reliable, high frequency interconnect solution.

Features

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads

Specifications

Impedance 50 Ohms
 Op Temp -67 to +302°F -55 to +150°C

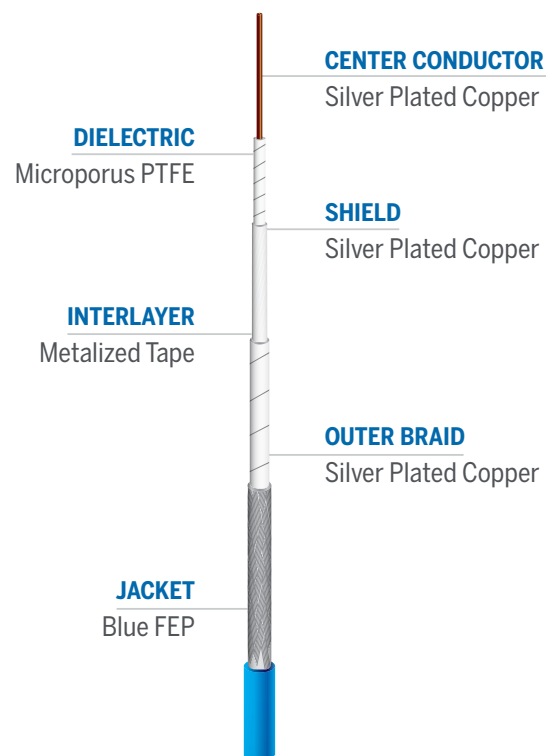
	Units	
Diameter	in (mm)	0.159 (4.04)
Weight	lb/ft (g/m)	0.026 (38)
Minimum Bend Radius	in (mm)	0.750 (19.0)
Maximum Frequency	GHz	40
Velocity of Propagation	%	80
Capacitance	pF/ft (pF/m)	25.4 (83.3)
Delay	ns/ft (ns/m)	1.27 (4.17)
Shielding	dB	>90

Calculation

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

Cable Insertion Loss
 $f = \text{Frequency (MHz)}$
 Use K values with
 matching length unit

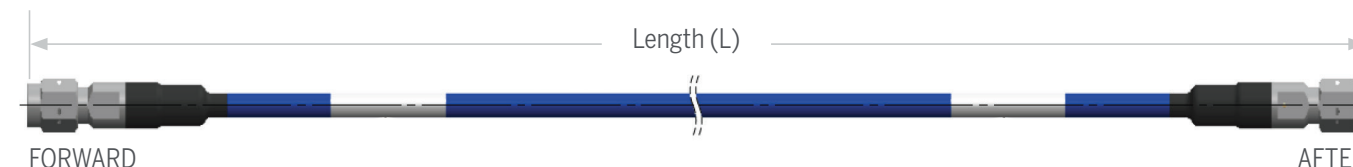
K values	dB/ft	dB/m
K1	0.34631	1.136243
K2	0.000146	0.000479



Insertion loss & VSWR

Stock Code	Max. Insertion Loss in dB @ 40GHz	Max. VSWR @ 40GHz
IE-00407-01	1.98	1.40
IE-00407-02	3.41	1.40
IE-00407-03	4.81	1.40
IE-00407-04	6.27	1.40
Stock Code	Max. Insertion Loss in dB @ 22GHz	Max. VSWR @ 22GHz
IE-00408-01	1.43	1.35
IE-00408-02	2.53	1.35
IE-00408-03	3.52	1.35
IE-00408-04	4.51	1.35

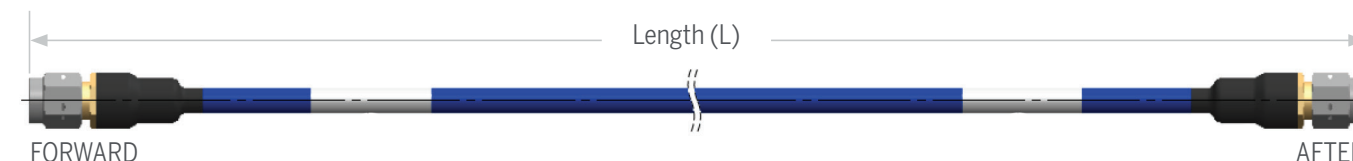
Ordering Guide



MGS160 - **SP029** **SP029** - **XX.X** **MM**
 Forward Connector After Connector Length Units of measure MM - Millimeters

Stock Code	Part-Number	Length (L) in mm
IE-00407-01	MGS160-KMKM-0.5M	500
IE-00407-02	MGS160-KMKM-1.0M	1000
IE-00407-03	MGS160-KMKM-1.5M	1500
IE-00407-04	MGS160-KMKM-2.0M	2000

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP029	Type 2.92mm (M) Straight	Stainless Steel, Passivated	Beryllium Copper, Gold Plated	0.08 x vf (GHz)



MGS160 - **SP007** **SP007** - **XX.X** **MM**
 Forward Connector After Connector Length Units of measure MM - Millimeters

Stock Code	Part-Number	Length (L) in mm
IE-00408-01	MGS160-SMSM-0.5M	500
IE-00408-02	MGS160-SMSM-1.0M	1000
IE-00408-03	MGS160-SMSM-1.5M	1500
IE-00408-04	MGS160-SMSM-2.0M	2000

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP007	Type SMA (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.08 x vf (GHz)

Rev.2: 3/6/2023

MaxGain® 200

High Performance Microwave Cable Assemblies



MaxGain® Assemblies are high-performance, ultra-low-loss microwave coaxial cables. Built with our unique spiral outer conductor technology, this light-weight cable is a reliable, high frequency interconnect solution.

Features

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads

Specifications

Impedance 50 Ohms
 Op Temp -67 to +302°F -55 to +150°C

	Units	
Diameter	in (mm)	0.201 (5.10)
Weight	lb/ft (g/m)	0.037 (55)
Minimum Bend Radius	in (mm)	1.25 (31.8)
Maximum Frequency	GHz	30
Velocity of Propagation	%	80
Capacitance	pF/ft (pF/m)	25.40 (83.3)
Delay	ns/ft (ns/m)	1.27 (4.17)
Shielding	dB	>90

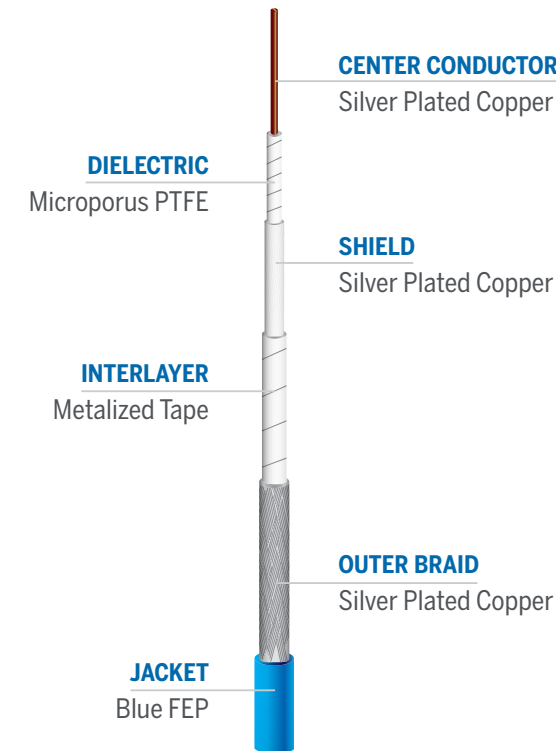
Calculation

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

Cable Insertion Loss
 $f = \text{Frequency (MHz)}$

Use K values with
 matching length unit

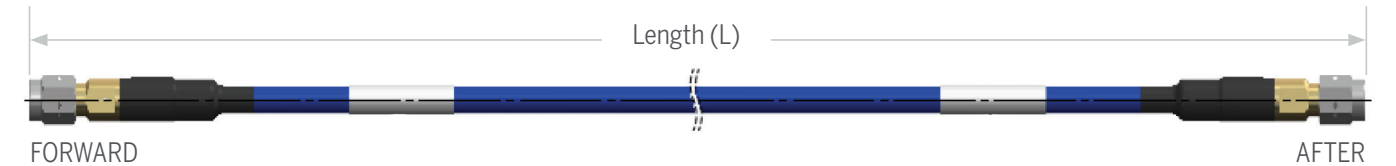
K values	dB/ft	dB/m
K1	0.2461	0.807454
K2	0.000139	0.000456



Insertion loss & VSWR

Stock Code	Max. Insertion Loss in dB @ 30GHz	Max. VSWR @ 30GHz
IE-00409-01	1.43	1.35
IE-00409-02	2.31	1.35
IE-00409-03	4.07	1.35
IE-00409-04	4.95	1.35
Stock Code	Max. Insertion Loss in dB @ 22GHz	Max. VSWR @ 22GHz
IE-00410-01	1.03	1.35
IE-00410-02	1.76	1.35
IE-00410-03	3.21	1.35
IE-00410-04	3.94	1.35

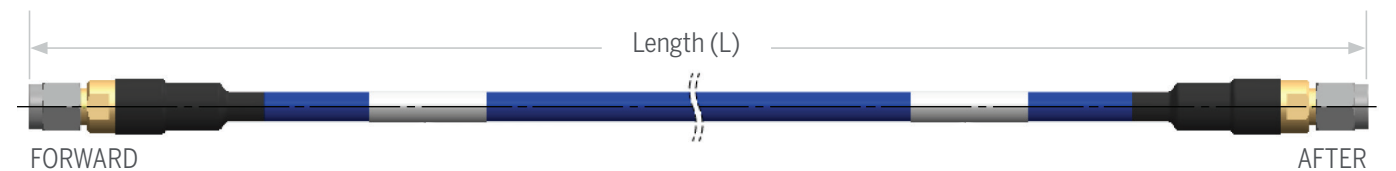
Ordering Guide



MGS200 - **SP013** **SP013** - **XX.X** **MM**
 Forward Connector After Connector Length Units of measure MM - Milimeters

Stock Code	Part-Number	Length (L) in mm
IE-00409-01	MGS200-KMKM-0.5M	500
IE-00409-02	MGS200-KMKM-1.0M	1000
IE-00409-03	MGS200-KMKM-2.0M	2000
IE-00409-04	MGS200-KMKM-2.5M	2500

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP013	Type K (M) Straight	Stainless Steel, Passivated	Beryllium Copper, Gold Plated	0.06 x vf (GHz)



MGS200 - **SP018** **SP018** - **XX.X** **MM**
 Forward Connector After Connector Length Units of measure MM - Milimeters

Stock Code	Part-Number	Length (L) in mm
IE-00410-01	MGS200-SMSM-0.5M	500
IE-00410-02	MGS200-SMSM-1.0M	1000
IE-00410-03	MGS200-SMSM-2.0M	2000
IE-00410-04	MGS200-SMSM-2.5M	2500

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP018	Type SMA (M) Straight	Stainless Steel, Passivated	Beryllium Copper, Gold Plated	0.06 x vf (GHz)

Rev.2: 3/6/2023

MaxGain® 300

High Performance Microwave Cable Assemblies



MaxGain® Assemblies are high-performance, ultra-low-loss microwave coaxial cables. Built with our unique spiral outer conductor technology, this light-weight cable is a reliable, high frequency interconnect solution.

Features

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads

Specifications

Impedance 50 Ohms
 Op Temp -67 to +302°F -55 to +150°C

	Units	
Diameter	in (mm)	0.314 (7.98)
Weight	lb/ft (g/m)	0.093 (138)
Minimum Bend Radius	in (mm)	1.750 (44.45)
Maximum Frequency	GHz	18.0
Velocity of Propagation	%	81
Capacitance	pF/ft (pF/m)	24.8 (81.2)
Delay	ns/ft (ns/m)	1.25 (4.10)
Shielding	dB	>90

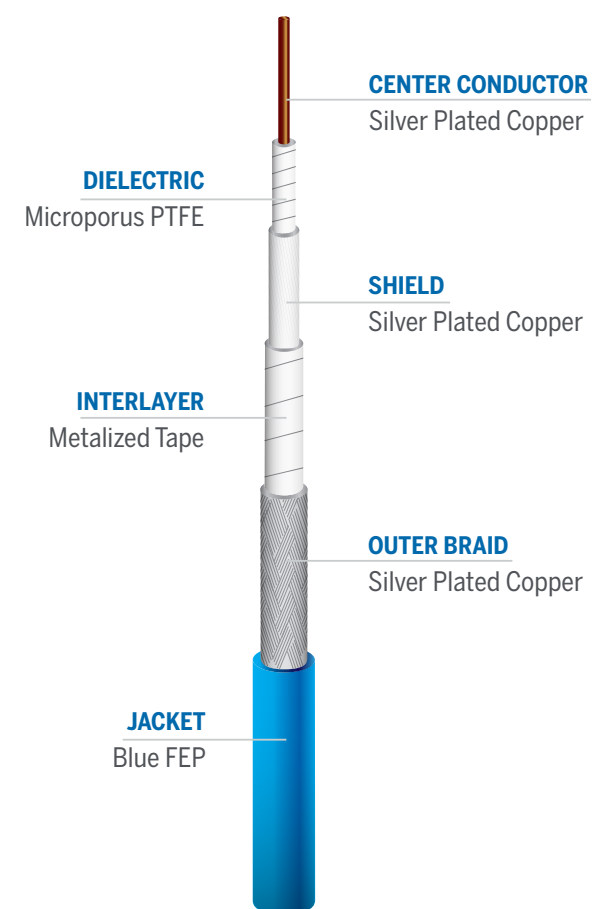
Calculation

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

Cable Insertion Loss
 $f = \text{Frequency (MHz)}$

Use **K** values with
 matching length unit

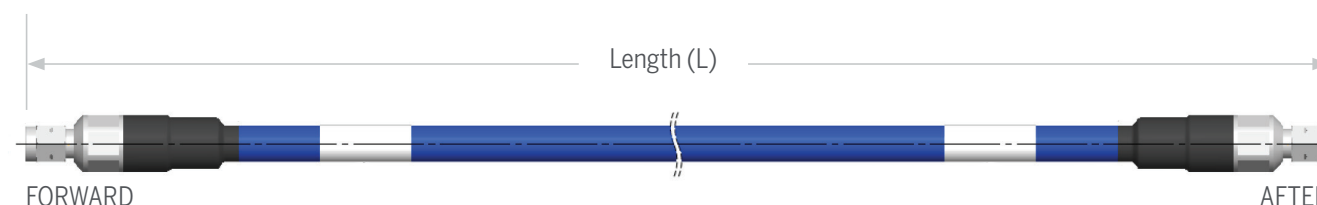
K values	dB/ft	dB/m
K1	0.1413	0.463605
K2	0.000102	0.000335



Insertion loss & VSWR @ 18GHz

Stock Code	Max. Insertion Loss in dB	Max. VSWR
IE-00411-01	1.21	1.25
IE-00411-02	2.09	1.25
IE-00411-03	2.64	1.25
IE-00411-04	2.86	1.25

Ordering Guide



MGS300 - **SP052** **SP052-** **XX.X** **MM**
 Forward Connector After Connector Length Units of measure
 MM - Millimeters

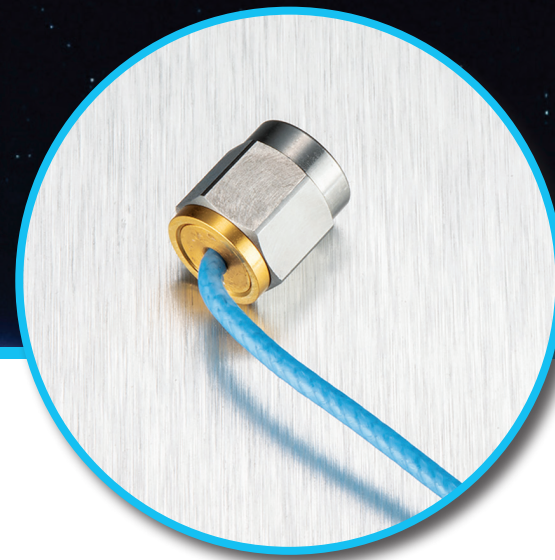
Stock Code	Part-Number	Length (L) in mm
IE-00411-01	MGS300-SMSM-1.0M	1000
IE-00411-02	MGS300-SMSM-2.0M	2000
IE-00411-03	MGS300-SMSM-2.5M	2500
IE-00411-04	MGS300-SMSM-3.0M	3000

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP052	Type SMA (M) Straight	Stainless Steel, Passivated	Beryllium Copper, Gold Plated	0.06 x vf (GHz)

Rev.2: 3/6/2023

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.

Features:

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads

Specifications



	Units	
Diameter	in (mm)	0.064 (1.63)
Weight	lb/ft (g/m)	0.004 (6)
Minimum Bend Radius	in (mm)	0.130 (3.30)
Maximum Frequency	GHz	50
Capacitance	pF/ft (pF/m)	29.9 (98.1)
Delay	ns/ft (ns/m)	1.45 (4.76)
Shielding	dB	>90

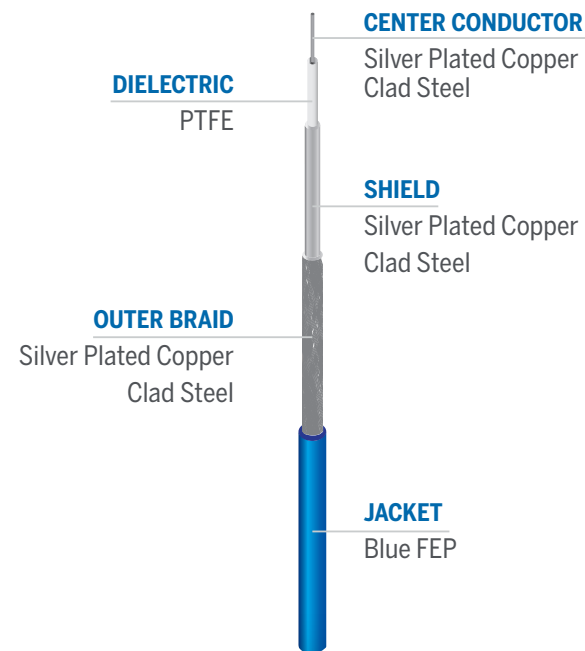
Calculation

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

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

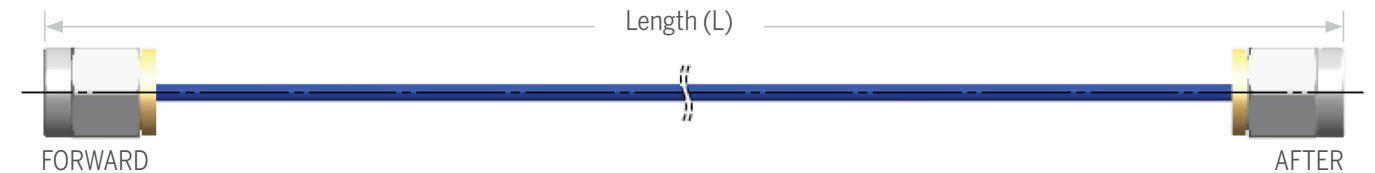
K values	dB/ft	dB/m
K1	0.01195	0.03920795
K2	0.000013	0.000042653



Insertion loss & VSWR

Stock Code	Max. Insertion Loss in dB @ 40GHz	Max. VSWR @ 40GHz
IE-00414-01	1.53	1.40
IE-00414-02	2.07	1.40
IE-00414-03	2.60	1.40
IE-00414-04	3.13	1.40
IE-00414-05	3.67	1.40
Stock Code	Max. Insertion Loss in dB @ 22GHz	Max. VSWR @ 22GHz
IE-00415-01	1.10	1.35
IE-00415-02	1.48	1.35
IE-00415-03	1.85	1.35
IE-00415-04	2.23	1.35
IE-00415-05	2.61	1.35

Ordering Guide

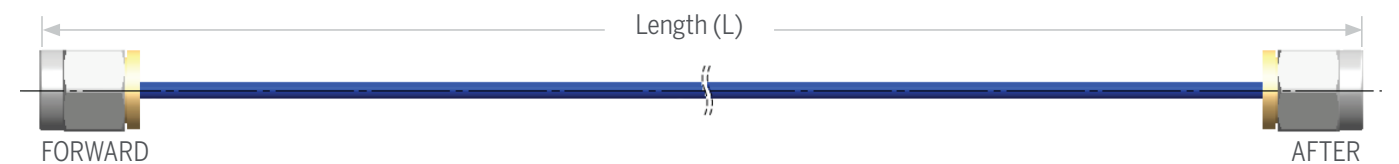


IBS047 - SP121 SP121- XX.X IN

Forward Connector After Connector Length Units of measure IN - Inchs

Stock Code	Part-Number	Length (L) in inch
IE-00414-01	IBS047-KMKM-4.0IN	4
IE-00414-02	IBS047-KMKM-6.0IN	6
IE-00414-03	IBS047-KMKM-8.0IN	8
IE-00414-04	IBS047-KMKM-10.0IN	10
IE-00414-05	IBS047-KMKM-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP121	Type K (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)



IBS047 - SP112 SP112- XX.X IN

Forward Connector After Connector Length Units of measure IN - Inchs

Stock Code	Part-Number	Length (L) in inch
IE-00415-01	IBS047-SMSM-4.0IN	4
IE-00415-02	IBS047-SMSM-6.0IN	6
IE-00415-03	IBS047-SMSM-8.0IN	8
IE-00415-04	IBS047-SMSM-10.0IN	100
IE-00415-05	IBS047-SMSM-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP112	Type SMA (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)

Rev.2: 3/6/2023

InstaBend® 086

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.

Features:

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads
- 90° torque resistance

Specifications

Impedance 50 Ohms

Op Temp -85 to 257°F -65 to 125°C

	Units	
Diameter	in (mm)	0.108 (2.74)
Weight	lb/ft (g/m)	0.013 (19)
Minimum Bend Radius	in (mm)	0.25 (6.35)
Maximum Frequency	GHz	50
Velocity of Propagation	%	70
Capacitance	pF/ft (pF/m)	29 (95.1)
Delay	ns/ft (ns/m)	1.45 (4.76)
Shielding	dB	>90

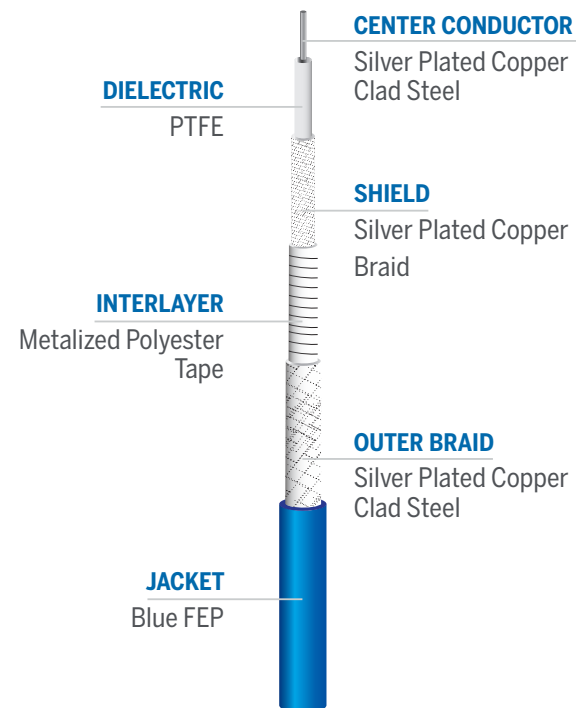
Calculation

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

Cable Insertion Loss
f = Frequency (MHz)

Use K values with
matching length unit

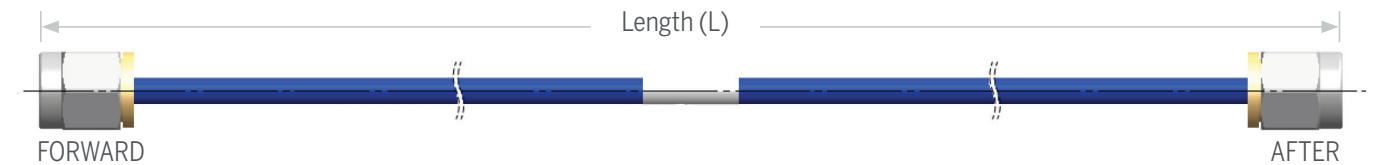
K values	dB/ft	dB/m
K1	0.006446	0.021148
K2	0.000013	0.000043



Insertion loss & VSWR

Stock Code	Max. Insertion Loss in dB @ 40GHz	Max. VSWR @ 40GHz
IE-00412-01	1.45	1.40
IE-00412-02	1.78	1.40
IE-00412-03	2.11	1.40
IE-00412-04	2.45	1.40
	Max. Insertion Loss in dB @ 22GHz	Max. VSWR @ 22GHz
IE-00413-01	1.02	1.35
IE-00413-02	1.24	1.35
IE-00413-03	1.47	1.35
IE-00413-04	1.71	1.35

Ordering Guide

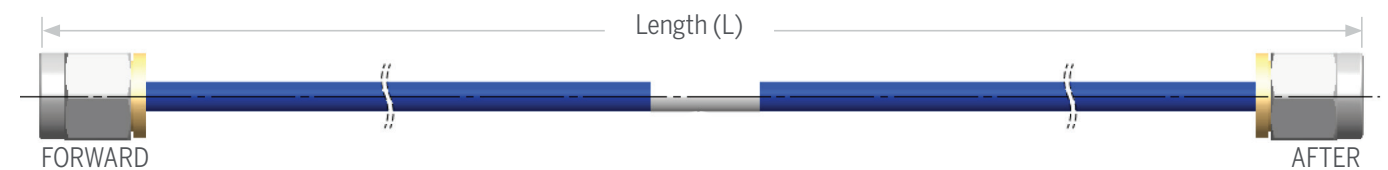


IBS086 - **SP120** **SP120** - **XX.X** **IN**

Forward Connector After Connector Length Units of measure IN - Inches

Stock Code	Part-Number	Length (L) in inch
IE-00412-01	IBS086-KMKM-6.0IN	6
IE-00412-02	IBS086-KMKM-8.0IN	8
IE-00412-03	IBS086-KMKM-10.0IN	10
IE-00412-04	IBS086-KMKM-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP120	Type 2.92mm (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)



IBS086 - **SP110** **SP110** - **XX.X** **IN**

Forward Connector After Connector Length Units of measure IN - Inches

Stock Code	Part-Number	Length (L) in inch
E-00413-01	IBS086-SMSM-6.0IN	6
IE-00413-02	IBS086-SMSM-8.0IN	8
IE-00413-03	IBS086-SMSM-10.0IN	10
IE-00413-04	IBS086-SMSM-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP110	Type SMA (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)

Rev.2: 3/6/2023

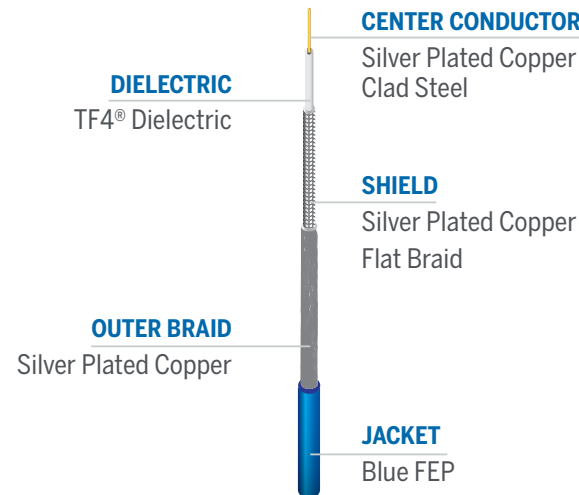
InstaBend® PhaseStable 047



IBPS-047 is a low-loss, highly flexible, foam-core micro coaxial cable. Originally designed for space satellite programs, this high-performance cable has many applications across multiple markets. It has a broad frequency range and strong durability making it ideal for medical, test equipment, and many other RF applications.

Features

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Optimized for lowest attenuation
- Ultra stable performance with flexure
- Superior shielding effectiveness (>90 dB)
- Radiation Resistance: 30 MRads



Specifications

Impedance 50 Ohms
Op Temp -65 to 150°C

	Units	
Diameter	in (mm)	0.062 (1.58)
Weight	lb/ft (g/m)	0.031 (46)
Minimum Bend Radius	in (mm)	0.25 (6.5)
Maximum Frequency	GHz	40
Velocity of Propagation	%	76
Capacitance	pF/ft (pF/m)	26.7 (87.6)
Delay	ns/ft (ns/m)	1.25 (4.10)
Shielding	dB	>80

Calculation

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

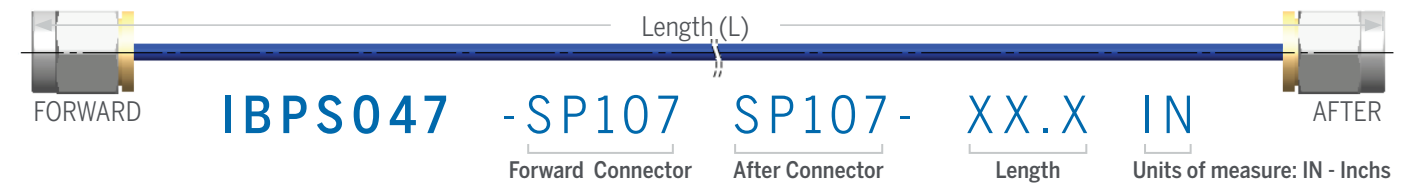
Cable Insertion Loss
f = Frequency (MHz)
Use K values with matching length unit

K values	dB/ft	dB/m
K1	0.01176752	0.03860924
K2	0.00000775	0.00002543

Insertion loss & VSWR

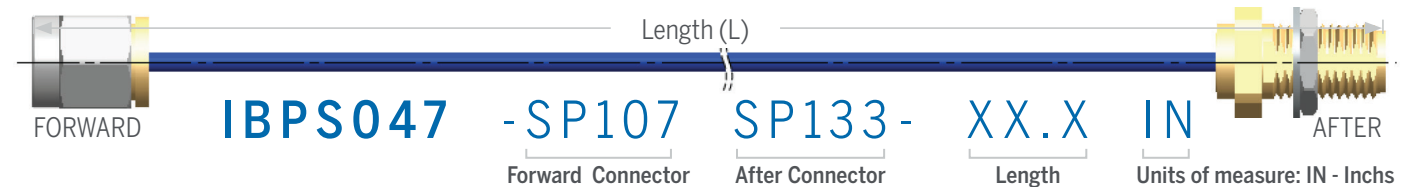
Stock Code	Max. Insertion Loss in dB @ 40GHz	Max. VSWR @ 40GHz
IE-00419-01	1.45	1.40
IE-00419-02	1.94	1.40
IE-00419-03	2.43	1.40
IE-00419-04	2.92	1.40
IE-00419-05	3.43	1.40
Stock Code	Max. Insertion Loss in dB @ 27GHz	Max. VSWR @ 27GHz
IE-00420-01	1.45	1.40
IE-00420-02	1.94	1.40
IE-00420-03	2.43	1.40
IE-00420-04	2.92	1.40
IE-00420-05	3.43	1.40
Stock Code	Max. Insertion Loss in dB @ 40GHz	Max. VSWR @ 40GHz
IE-00421-01	1.17	1.35
IE-00421-02	1.56	1.35
IE-00421-03	1.96	1.35
IE-00421-04	2.35	1.35
IE-00421-05	2.76	1.35

Ordering Guide



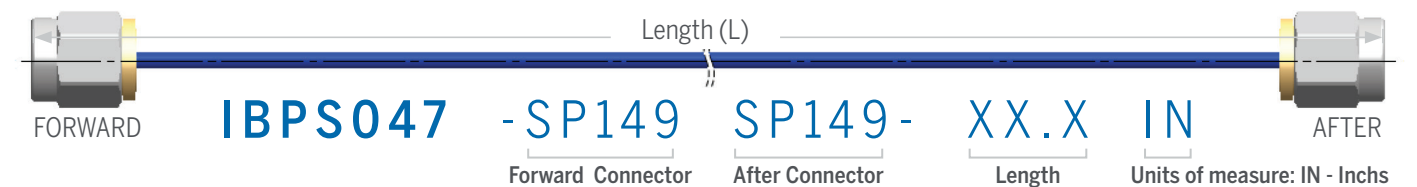
Stock Code	Part-Number	Length (L) in inch
IE-00419-01	IBPS047-KMKM-4.0IN	4
IE-00419-02	IBPS047-KMKM-6.0IN	6
IE-00419-03	IBPS047-KMKM-8.0IN	8
IE-00419-04	IBPS047-KMKM-10.0IN	10
IE-00419-05	IBPS047-KMKM-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP107	Type K (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)



Stock Code	Part-Number	Length (L) in inch
IE-00420-01	IBPS047-KMKF-4.0IN	4
IE-00420-02	IBPS047-KMKF-6.0IN	6
IE-00420-03	IBPS047-KMKF-8.0IN	8
IE-00420-04	IBPS047-KMKF-10.0IN	10
IE-00420-05	IBPS047-KMKF-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP133	Type K (F) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)



Stock Code	Part-Number	Length (L) in inch
IE-00421-01	IBPS047-SMSM-4.0IN	4
IE-00421-02	IBPS047-SMSM-6.0IN	6
IE-00421-03	IBPS047-SMSM-8.0IN	8
IE-00421-04	IBPS047-SMSM-10.0IN	10
IE-00421-05	IBPS047-SMSM-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP149	Type SMA (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)

Rev.2: 3/6/2023

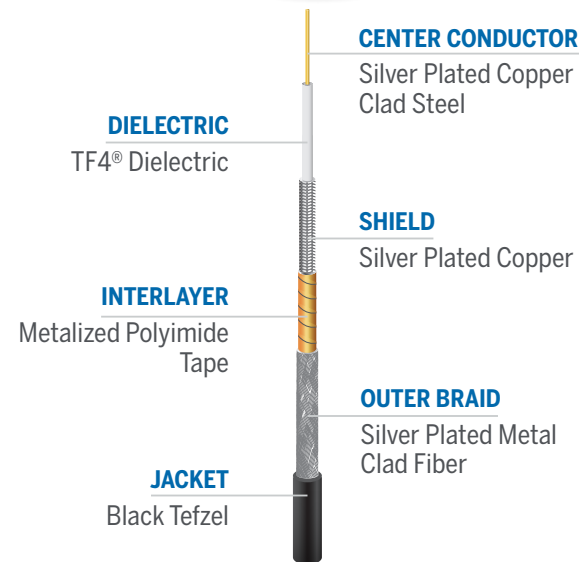
InstaBend® PhaseStable 092



InstaBend® PhaseStable 092 is an Ultra-Flexible phase-stable coax assembly featuring a proprietary fluorocarbon dielectric, TF4®, eliminating the PTFE change phase occurring around 19 °C. PhaseTrack assemblies have the same triple-shield construction used in our popular SF®, SFT®, SilverLine®, and MilTech® cables and are ideal for applications demanding stable phase over temperature.

Features:

- Sold as cable assemblies
- Low outgassing materials per ASTM E595
- Class 100,000 clean room manufacturing
- Vented connectors, if applicable
- Radiation Resistance: 100 MRads



Specifications

Impedance 50 Ohms
Op Temp -65 to 150°C

	Units	
Diameter	in (mm)	0.103 (2.61)
Weight	lb/ft (g/m)	0.0113 (17)
Minimum Bend Radius	in (mm)	0.5 (12.7)
Maximum Frequency	GHz	40
Velocity of Propagation	%	79.5
Capacitance	pF/ft (pF/m)	25.4
Delay	ns/ft (ns/m)	1.24 (4.07)
Shielding	dB	-90

Insertion loss & VSWR

Stock Code	Max. Insertion Loss in dB @ 40GHz	Max. VSWR @ 40GHz
IE-00416-01	1.06	1.35
IE-00416-02	1.29	1.35
IE-00416-03	1.53	1.35
IE-00416-04	1.76	1.35
	Max. Insertion Loss in dB @ 27GHz	Max. VSWR @ 27GHz
IE-00417-01	0.83	1.50
IE-00417-02	1.06	1.50
IE-00417-03	1.29	1.50
IE-00417-04	1.53	1.50
IE-00417-05	1.76	1.50
	Max. Insertion Loss in dB @ 27GHz	Max. VSWR @ 27GHz
IE-00418-01	1.06	1.35
IE-00418-02	1.29	1.35
IE-00418-03	1.53	1.35
IE-00418-04	1.76	1.35

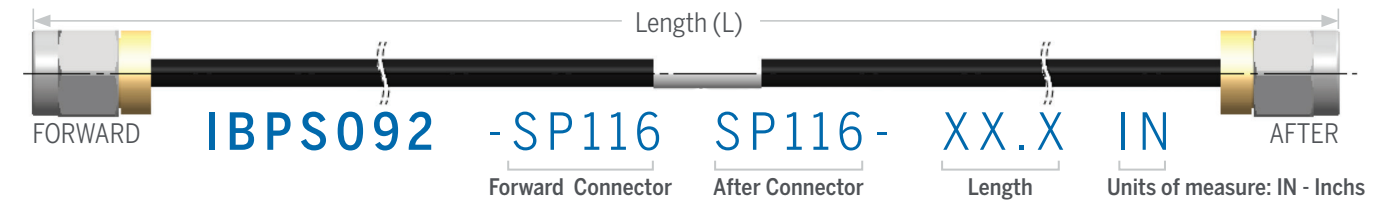
Calculation

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

Cable Insertion Loss
f = Frequency (MHz)
Use K values with matching length unit

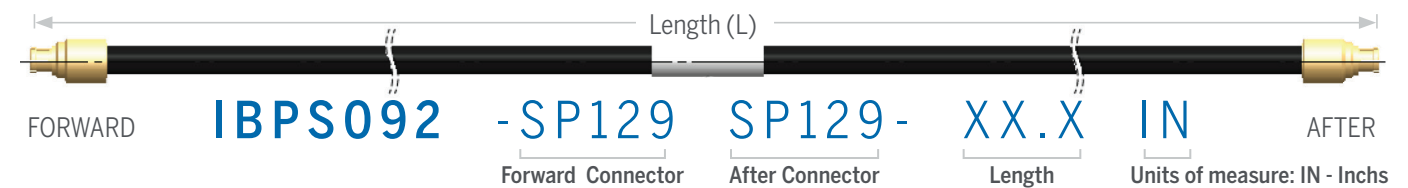
K values	dB/ft	dB/m
K1	0.006575	0.021573
K2	0.000009607	0.000031521

Ordering Guide



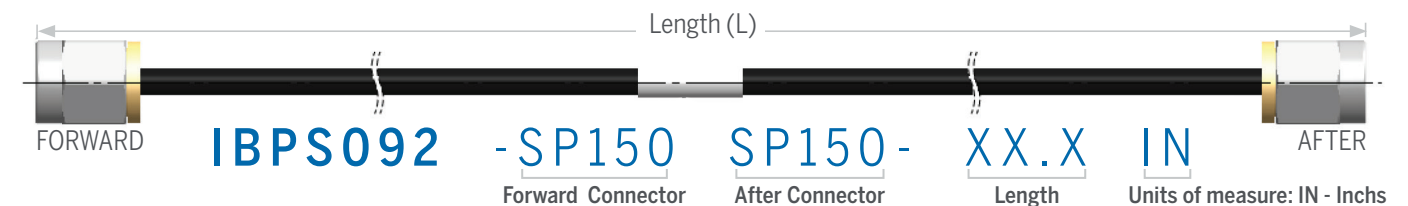
Stock Code	Part-Number	Length (L) in inch
IE-00416-01	IBPS092-KMKM-6.0IN	6
IE-00416-02	IBPS092-KMKM-8.0IN	8
IE-00416-03	IBPS092-KMKM-10.0IN	12
IE-00416-04	IBPS092-KMKM-12.0IN	10

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP116	Type K (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)



Stock Code	Part-Number	Length (L) in inch
IE-00417-01	IBPS092-MSMPFMSMPF-4.0IN	4
IE-00417-02	IBPS092-MSMPFMSMPF-6.0IN	6
IE-00417-03	IBPS092-MSMPFMSMPF-8.0IN	8
IE-00417-04	IBPS092-MSMPFMSMPF-10.0IN	10
IE-00417-05	IBPS092-MSMPFMSMPF-12.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP129	Type Mini SMP (F) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)



Stock Code	Part-Number	Length (L) in inch
IE-00418-01	IBPS092-SMSM-6.0IN	6
IE-00418-02	IBPS092-SMSM-8.0IN	8
IE-00418-03	IBPS092-SMSM-10.0IN	10
IE-00418-04	IBPS092-SMSM-10.0IN	12

Connector Code	Description	Connector Body	Center Contact	Connector Loss (per pair)
SP150	Type SMA (M) Straight	Stainless Steel, Gold Plated	Beryllium Copper, Gold Plated	0.06 x v(f) (GHz)

Rev.2: 3/6/2023



Times Microwave Systems

358 Hall Avenue

Wallingford, CT.06492, USA

T 800. 867.2629

