Multiport SMPX Coax Cable Assemblies

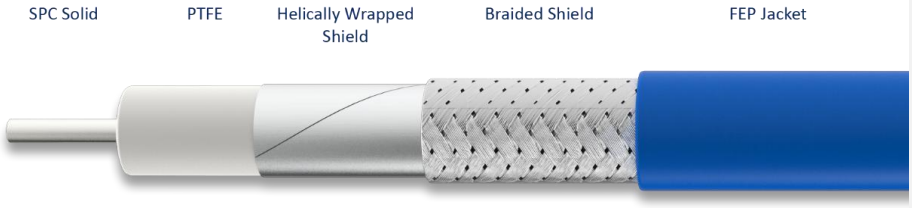
Flexible 047, Breakout to SMPX(F) | Precision 1.00 mm & 1.85 mm

Cable Configurations

Connector	SMPX (F)
Breakout Options	SMPX (F)
	1.00 mm Female
	1.00 Male
	1.85 mm Female
	1.85 mm Male
Type of Cable	047 Flexible

SMPX (F) Connector Materials

Description	Material	Finish
Ground Bodies	Brass	Gold Plated
Signal Body	Beryllium Copper	Gold Plated
Enclosure	Aluminum	Anodized



Mechanical Specifications

Shield Diameter	0.047 inch (1.19 mm)
Minimum Bending Radius	Static: 2.5 x Jacket Diameter
	Dynamic: 5 x Jacket Diameter

Environmental Specifications

Operating Temperature Range	-45 to +100 °C

Features:

- Blind Mate
- Easy Installation
- Field Replaceable
- Customizable

Multiport Offering:

- 1x2
- 1x4
- 1x8
- 2x8
- 1x16
- 1x32

RoHS COMPLIANT

sales@multilaneinc.com

Multiport SMPX Coax Cable Assemblies

Flexible 047, Breakout to SMPX(F) | Precision 1.00 mm & 1.85 mm

Breakout to Precision 1.00 mm

Precision Connector Materials

Description	Material	Finish
Connector Body & Center Pin	Beryllium Copper	Gold Plated
Rear Sleeve / Nut	Stainless Steel	Passivated

Electrical Specifications

Impedance	50 Ohms
Frequency Range	DC to 110 GHz
V.S.W.R	1.4
Velocity of Propagation	70%

Measured Insertion Loss

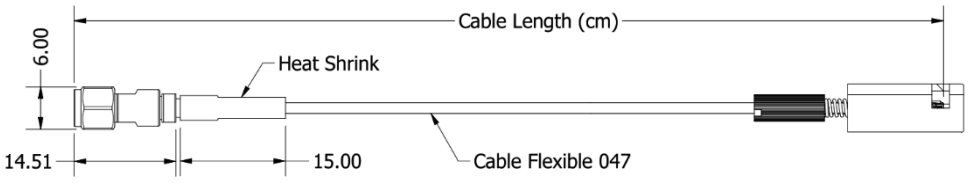
Cable Length	26 GHz	53 GHz	67 GHz	110 GHz
7.5 cm	-0.8 dB	-1.3 dB	-1.6 dB	-2.3 dB
15 cm	-1.33 dB	-2.24 dB	-2.6 dB	-4 dB
25 cm	-1.97 dB	-3.14 dB	-3.74 dB	-5.6 dB
30 cm	-2.4 dB	-3.86 dB	-4.72 dB	-6.5 dB
45 cm	-3.56 dB	-5.47 dB	-6.6 dB	-9.43 dB
60 cm	-4.6 dB	-7.11 dB	-8.4 dB	-12.68 dB
80 cm	-5.51 dB	-9.07 dB	-10.92 dB	-16.6 dB
100 cm	-7.33 dB	-12.89 dB	-13.93 dB	-20.6 dB
120 cm	-8.75 dB	-15.4 dB	-16.6 dB	-24.6 dB

Interface Handling: Electrical performance assumes clean, dry, and undamaged connector interfaces

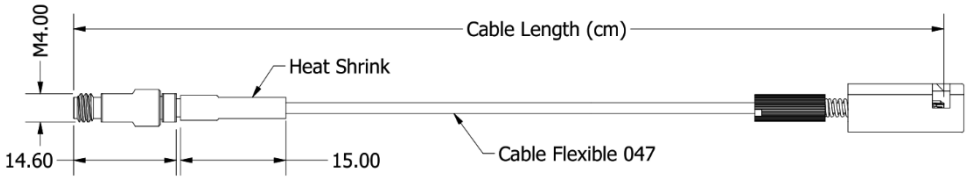
Protect unmated interfaces with clean caps during shipment and storage; caps provide contamination and mechanical protection only and do not guarantee an IP rating

Inspect and clean interfaces before mating

Precision 1.00 mm Male



Precision 1.00 mm Female



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Multiport SMPX Coax Cable Assemblies

Flexible 047, Breakout to SMPX(F) | Precision 1.00 mm & 1.85 mm

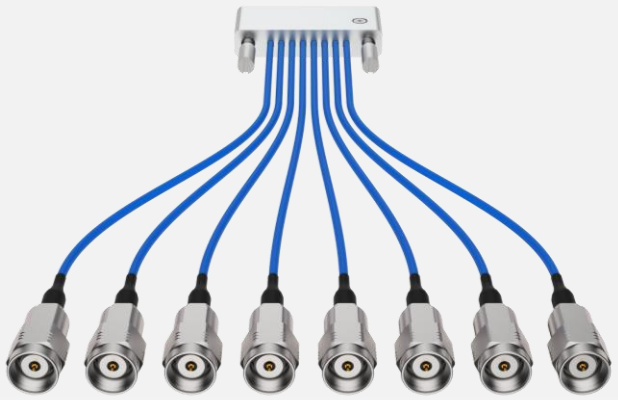
Breakout to Precision 1.85 mm

Precision Connector Materials

Description	Material	Finish
Center Pin	Beryllium Copper	Gold Plated
Connector Body	Stainless Steel	Passivated

Electrical Specifications

Impedance	50 Ohms
Frequency Range	DC to 67 GHz
V.S.W.R	1.4
Velocity of Propagation	70%



Interface Handling: Electrical performance assumes clean, dry, and undamaged connector interfaces

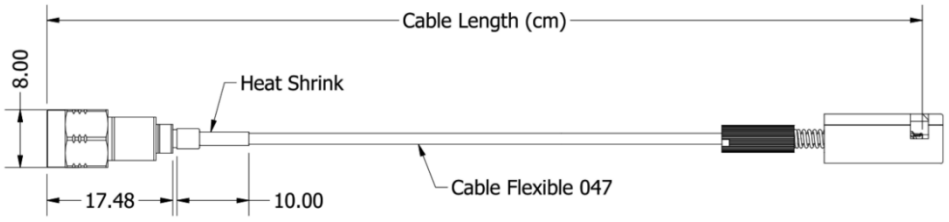
Protect unmated interfaces with clean caps during shipment and storage; caps provide contamination and mechanical protection only and do not guarantee an IP rating

Inspect and clean interfaces before mating

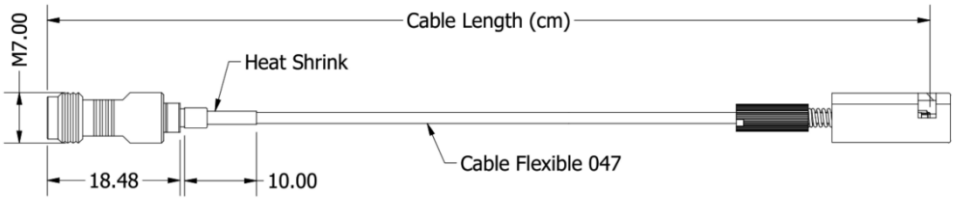
Measured Insertion Loss

Cable Length	12.5 GHz	26 GHz	53 GHz	67 GHz
7.5 cm	-0.78 dB	-1.1 dB	-1.58 dB	-1.91 dB
15 cm	-0.93 dB	-1.42 dB	-2.3 dB	-2.8 dB
25 cm	-1.13 dB	-1.84 dB	-3.25 dB	-3.98 dB
30 cm	-1.6 dB	-2.42 dB	-3.77 dB	-4.6 dB
45 cm	-2.4 dB	-3.57 dB	-5.51 dB	-6.6 dB
60 cm	-3.15 dB	-4.7 dB	-7.3 dB	-8.7 dB
80 cm	-3.83 dB	-5.75 dB	-8.67 dB	-10.6 dB
100 cm	-3.95 dB	-6.15 dB	-10.55 dB	-12.83 dB
120 cm	-6.67 dB	-10.1 dB	-17.7 dB	-16.8 dB

Precision 1.85 mm Male



Precision 1.85 mm Female



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Multiport SMPX Coax Cable Assemblies

Flexible 047, Breakout to SMPX(F) | Precision 1.00 mm & 1.85 mm

Breakout to SMPX (F)

SMPX (F) Connector Materials

Description	Material	Finish
Ground Bodies	Brass	Gold Plated
Signal Body	Beryllium Copper	Gold Plated

Electrical Specifications

Impedance	50 Ohms
Frequency Range	DC to 110 GHz
V.S.W.R	1.4
Velocity of Propagation	70%

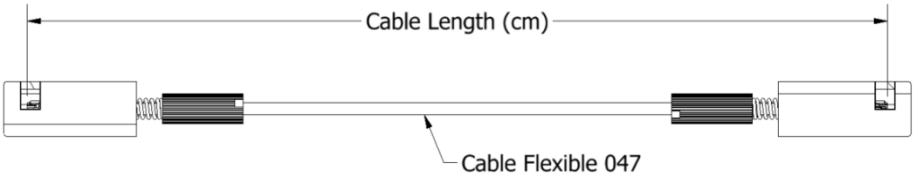
Measured Insertion Loss

Cable Length	26 GHz	53 GHz	67 GHz	110 GHz
7.5 cm	-0.92 dB	-1.79 dB	-2.4 dB	-2.7 dB
15 cm	-1.44 dB	-2.53 dB	-3.2 dB	-4 dB
25 cm	-1.98 dB	-3.51 dB	-4.3 dB	-5.7 dB
30 cm	-2.48 dB	-4 dB	-4.8 dB	-6.6 dB
45 cm	-3.52 dB	-5.47 dB	-6.4 dB	-9.2 dB
60 cm	-4.56 dB	-6.94 dB	-8 dB	-11.8 dB
80 cm	-6.52 dB	-8.9 dB	-10.13 dB	-15.26 dB
100 cm	-8.16 dB	-10.86 dB	-12.26 dB	-18.73 dB
120 cm	-9.77 dB	-12.82 dB	-14.4 dB	-22.2 dB

Interface Handling: Electrical performance assumes clean, dry, and undamaged connector interfaces

Protect unmated interfaces with clean caps during shipment and storage; caps provide contamination and mechanical protection only and do not guarantee an IP rating

Inspect and clean interfaces before mating

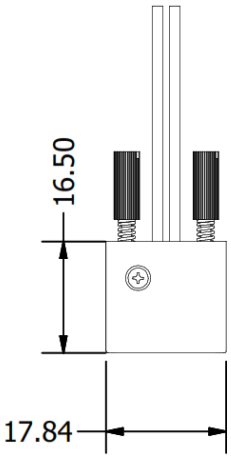


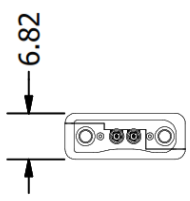
Multiport SMPX Coax Cable Assemblies

Flexible 047, Breakout to SMPX(F) | Precision 1.00 mm & 1.85 mm

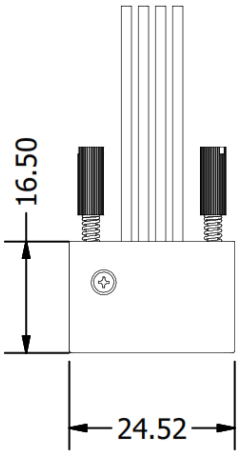
Ganged Cable Assemblies

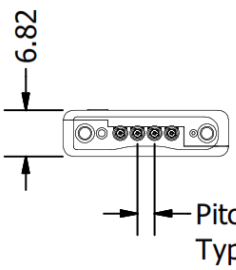
SMPX 1x2





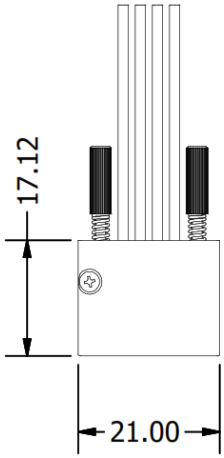
SMPX 1x4

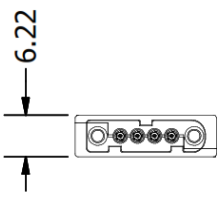




SMPX 1x4 TRP

Compact Form Factor





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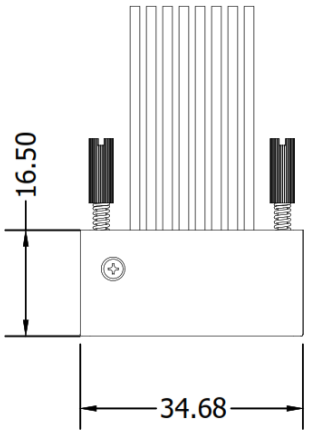
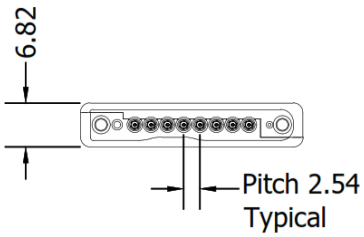
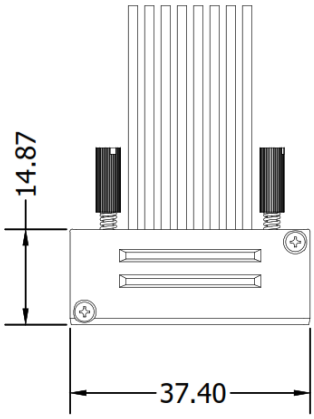
Ganged Cable Assemblies

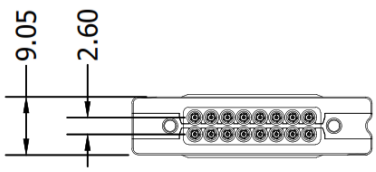
SMPX 1x8





SMPX 2x8



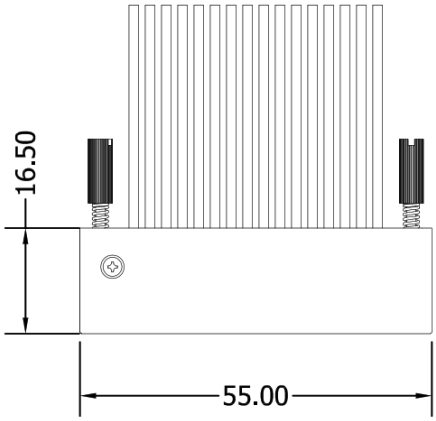


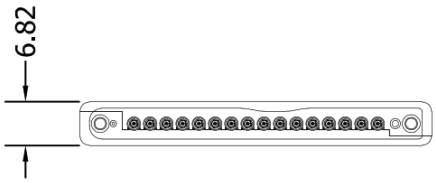
Multiport SMPX Coax Cable Assemblies

Flexible 047, Breakout to SMPX(F) | Precision 1.00 mm & 1.85 mm

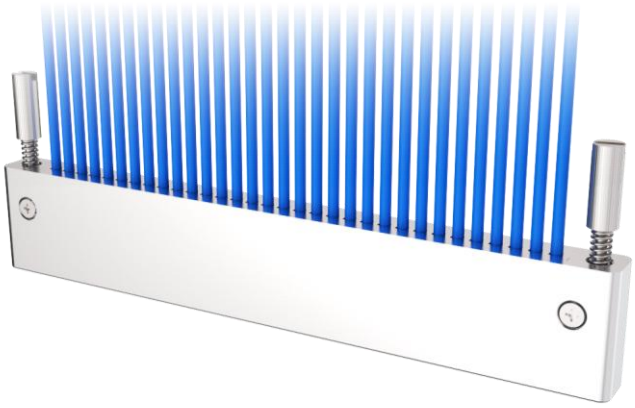
Ganged Cable Assemblies

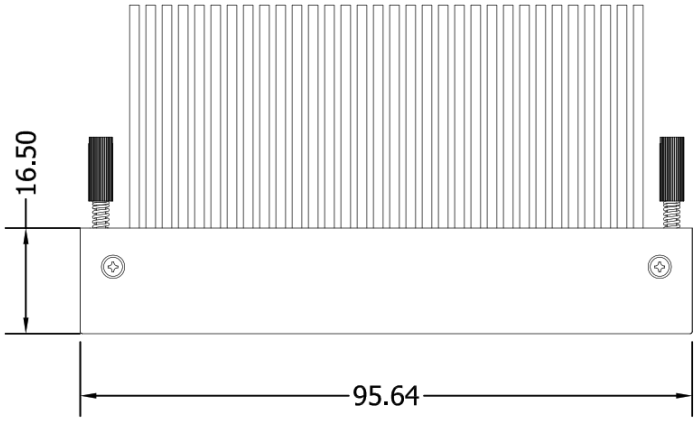
SMPX 1x16

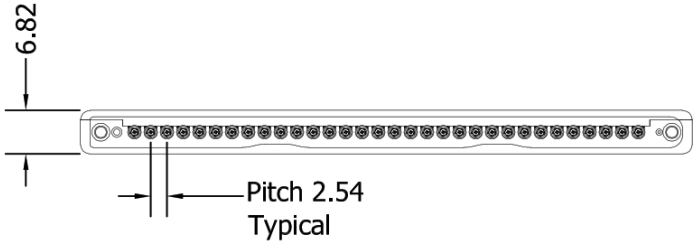




SMPX 1x32







How to Order

SMPX (F) to Precision 1.00 mm or 1.85 mm Breakout

Customer Part Number: MLCC-SMPXBFC**XXX**-F047**ZZ**-**YYYY**ST-**U**

Ports	XXX
1x2	12
1x4	14
1x4 TRP	14TRP00
1x8	18
2x8	28HF00
1x16	116
1x32	132

Length	ZZ
7.5 cm	075
15 cm	15
30 cm	30
45 cm	45
60 cm	60
Custom Lengths Available	

Connector	YYYY
1.00 Male	100M
1.00 Female	100F
1.85 Male	185M
1.85 Female	185F

Phase Match	U
≤ 0.3 ps	03
≤ 1.0 ps	*null*

SMPX (F) to SMPX (F) Breakout

Customer Part Number: MLCC-SMPXBFC**XXX**-F047**ZZ**-SMPXBFC**YYY**-**U**

Side 1 Ports	XXX
1x2	12
1x4	14
1x4 TRP	14TRP00
1x8	18
2x8	28HF00
1x16	116
1x32	132

Length	ZZ
7.5 cm	075
15 cm	15
30 cm	30
45 cm	45
60 cm	60
Custom Lengths Available	

Side 2 Ports	YYY
1x2	12
1x4	14
1x4 TRP	14TRP00
1x8	18
2x8	28HF00
1x16	116
1x32	132

Phase Match	U
≤ 0.3 ps	03
≤ 1.0 ps	*null*

Example:

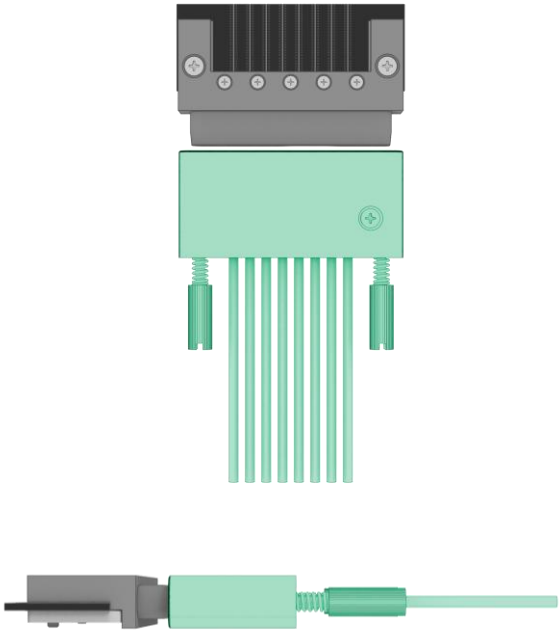
PN: *MLCC-SMPXBFC18-F04715-100MST-03*

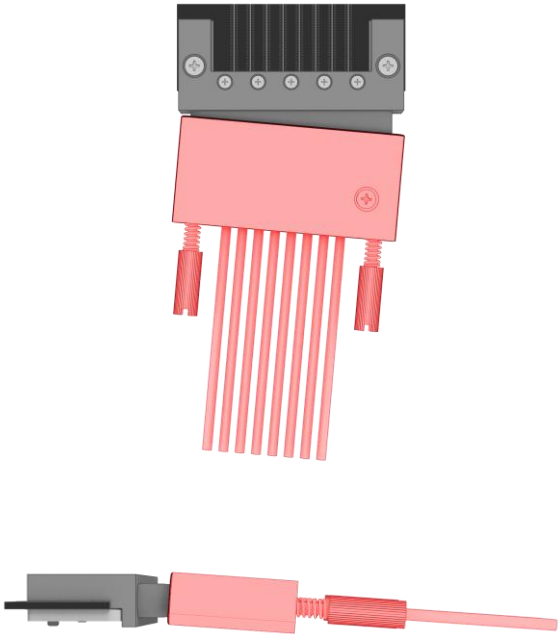
Description: *Coax Cable Assembly, 1X8 SMPX Blind-Mate (F) to 1.00 mm (M), Flexible 047, 15 cm, phase matched to +/-0.15 ps*

Note: **For custom routing configurations, reach out to sales@multilaneinc.com**

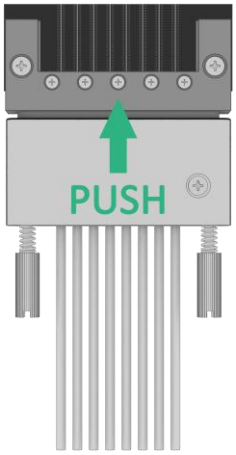
Mating Instructions

1. Ensure a straight alignment between the cable assembly and the connector



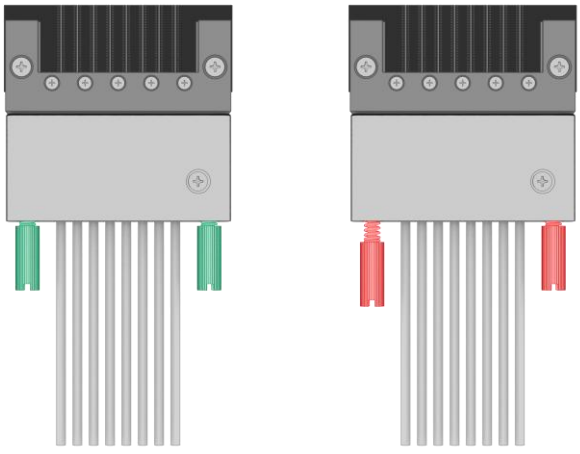


2. Push the cable assembly toward the male connector before tightening the screws



3. Tighten the two captive thumb screws evenly and in parallel using a torque screwdriver with an ideal torque of **0.31 in-lb (3.5 cN.m)**

Do not fully tighten one side before the other

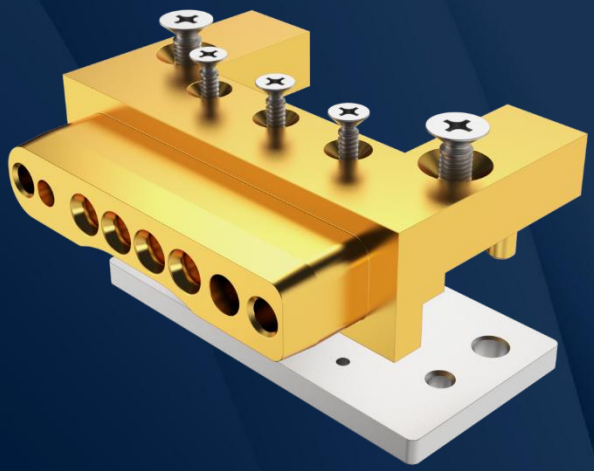


Explore the SMPX Ecosystem

SMPX Vertical Mount Connectors

Click Here for Technical Datasheet

SMPX Edge Launch Connectors



Click Here for Technical Datasheet

multiLane

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