株式会社 川島製作所
214-0031 川崎市多摩区東生田1-3-5
Tel: 044-911-7073 Fax: 044-911-9621
http://www.kmco.co.jp/ E-mail: sales-j@kmco.co.jp

Coaxial Adapters, Within (Conform to IEEE-Std-287)

1 mm	Up to 110 GHz
1.85 mm	Up to 65 GHz
2.4 mm	Up to 50 GHz
2.92 mm	Up to 40 GHz
3.5 mm	Up to 26.5 GHz

Coaxial Adapters, Between (Conform to IEEE-Std-287)

1.85 mm/1 mm	Up to 67 GHz
2.4 mm/1.85 mm	Up to 50 GHz
2.92 mm/2.4 mm	Up to 40 GHz
3.5 mm/2.4 mm	Up to 26.5 GHz

Panel Adapters, Front Access, Within (Conform to IEEE-Std-287)

1.85 mm	Up to 65 GHz
2.92 mm	Up to 40 GHz

Panel Adapters, Within (Conform to IEEE-Std-287)

1.85 mm	Up to 65 GHz
2.92 mm	Up to 40 GHz

Panel Adapters, Between (Conform to IEEE-Std-287 and MIL-std-348A)

1.85 mm/SMPM(*)	Up to 65 GHz
2.92 mm/SMPM(*)	Up to 40 GHz

(*) Compatible with "GPPO" and "Mini SMP"

SMA Panel Adapters, Within (Long-Life Model, Durability > 5,000 cycles)

Female/Female	Up to 20 GHz

SMA Swept Adapters, Within (90 Degrees Angled-Swept)

Male/Female	Up to 24.6 GHz

Subject to Change Without Notice

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

1 mm/1 mm

DC - 110 GHz, Coaxial Adapters, In-Series

DESCRIPTION

"KPC100MF, FF, and MM" are small size, low SWR, and low loss coaxial adapters. They are designed for ultra-broadband (up to sub-millimeter wave) measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

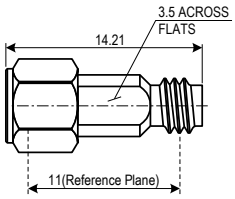
Frequency Range	DC - 110 GHz
SWR	< 1.3 (*), <1.5 (**)
Insertion Loss	< 0.45 dB
Electrical Length	11.6 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

Body and Outer Conductor	Gold Plated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	45 N-cm (Nominal)
Connect/Disconnect Life	> 500 Cycles (Estimate)

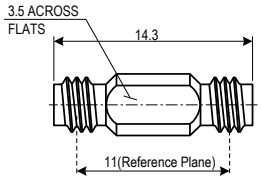
TYPE: KPC100MF

1 mm Male/1 mm Female



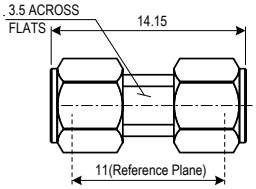
TYPE: KPC100FF

1 mm Female/1 mm Female

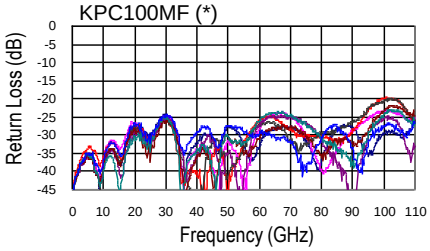


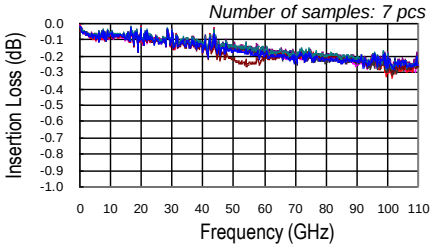
TYPE: KPC100MM

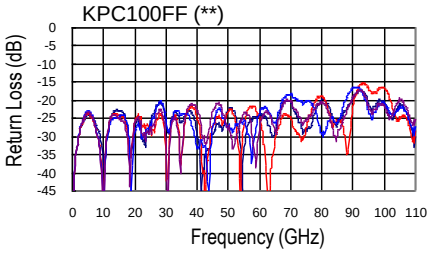
1 mm Male/1 mm Male

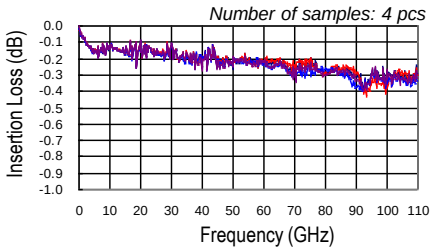


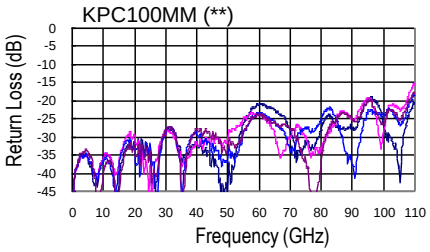
Typical Performance

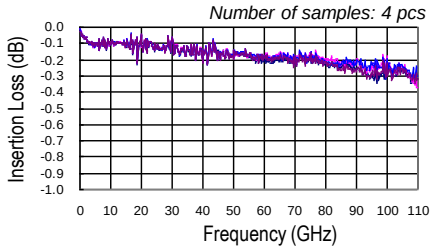




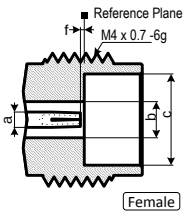


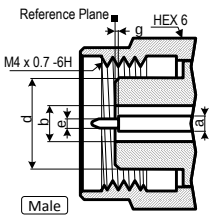






Interface Mating Dimensions of KPC100 (1 mm Connectors)





KPC100(1 mm)	
a	ϕ 0.434
b	ϕ 1.000
c	ϕ 2.390
d	ϕ 2.358
e	ϕ 0.250
f	0-0.013
g	0-0.013

NOTE:
All dimensions are in millimeters.
(*) Calibration as ***insertable-device***
(**) Calibration as ***non-insertable-device***

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice *Rev. 03 June 2017*

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO **Kawashima Manufacturing Co., Ltd.**
ISO9001:14001 Certified
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

1.85 mm/1.85 mm

DC - 65 GHz, Coaxial Adapters, In-Series

DESCRIPTION

"KPC185MF, FF, and MM" are small size, low SWR, and low loss coaxial adapters. They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 65 GHz
SWR	< 1.3
Insertion Loss	< 0.35 dB
Electrical Length	17.5 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

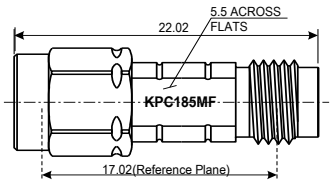
Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time
for Shipping

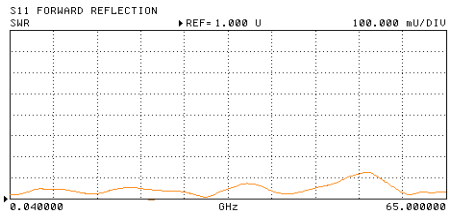
Typical Performance

TYPE: KPC185MF

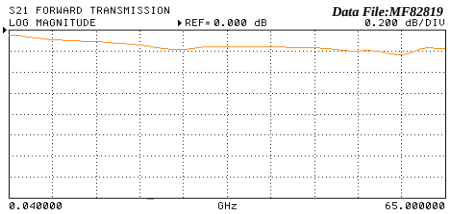
1.85 mm Male/1.85 mm Female



SWR

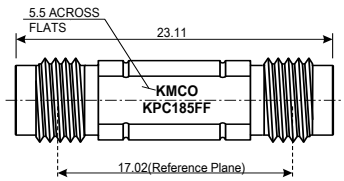


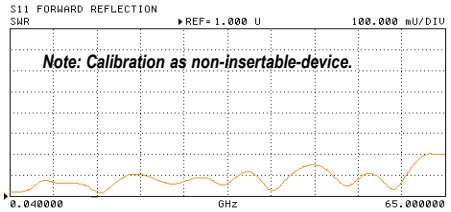
Insertion Loss

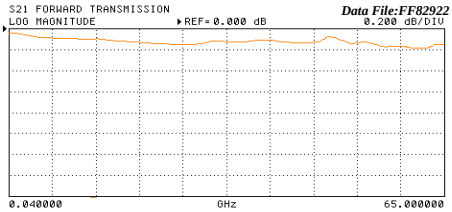


TYPE: KPC185FF

1.85 mm Female/1.85 mm Female

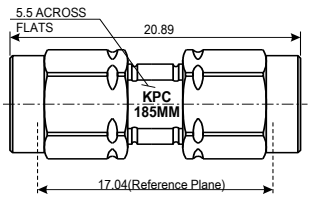


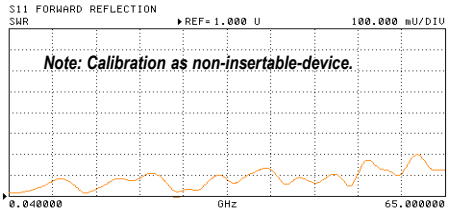


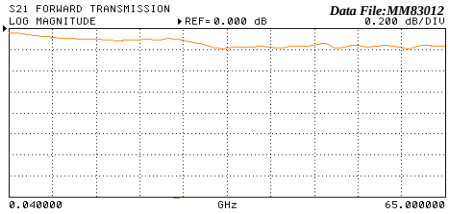


TYPE: KPC185MM

1.85 mm Male/1.85 mm Male

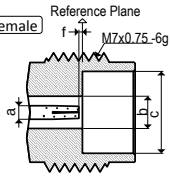


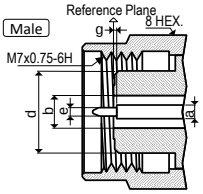




Interface Mating Dimensions of KPC185 (1.85 mm Connectors <*>)

KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050





NOTE:
All dimensions are in millimeters.

<*> Matable with 2.4 mm connectors

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified **Kawashima Manufacturing Co., Ltd.**

1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

2.4 mm/2.4 mm

DC - 50 GHz, Coaxial Adapters, In-Series

DESCRIPTION

"KPC240MF, FF, and MM" are small size, low SWR, and low loss coaxial adapters. They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 50 GHz
SWR	< 1.25
Insertion Loss	< 0.3 dB
Electrical Length	17.5 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

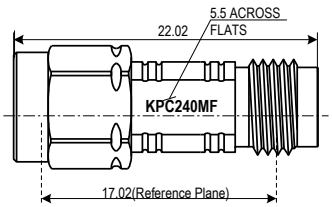
Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time for Shipping

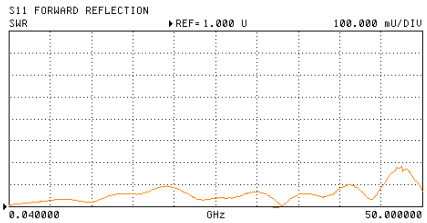
Typical Performance

TYPE: KPC240MF

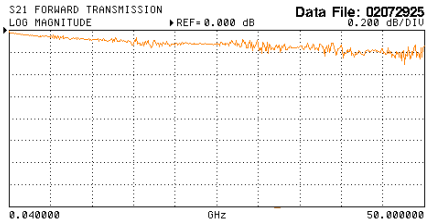
2.4 mm Male/2.4 mm Female



SWR

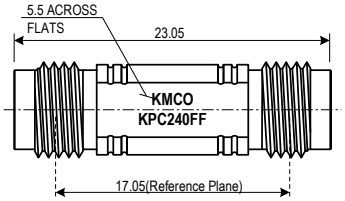


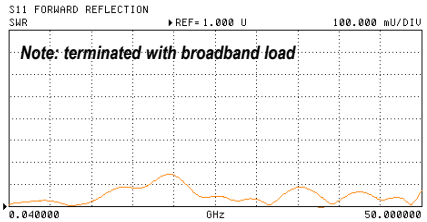
Insertion Loss

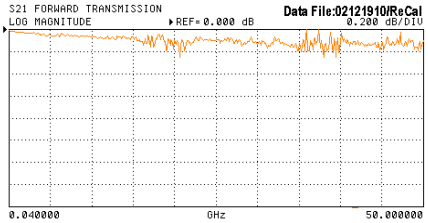


TYPE: KPC240FF

2.4 mm Female/2.4 mm Female

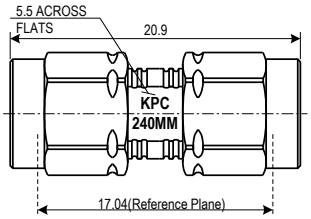


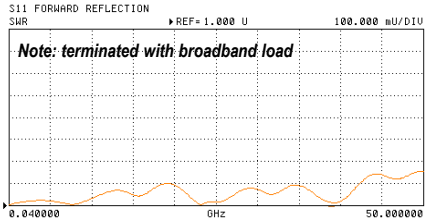


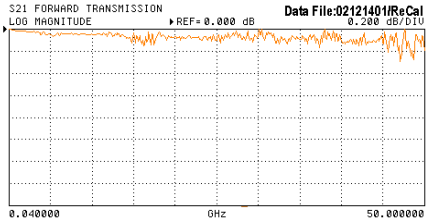


TYPE: KPC240MM

2.4 mm Male/2.4 mm Male

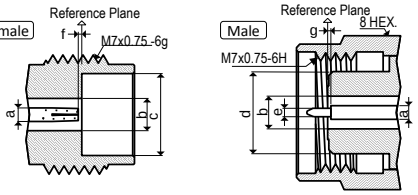






Interface Mating Dimensions of KPC240 (2.4 mm Connectors <*>)

KPC240(2.4 mm)	
a	ϕ 1.042
b	ϕ 2.400
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050



<*> Matable with 1.85 mm connectors

RoHS Compliant

REACH Compliant

NOTE:
All dimensions are in millimeters.

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO **Kawashima Manufacturing Co., Ltd.**
ISO9001:14001 Certified

1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

2.92 mm/2.92 mm

DC - 40 GHz, Coaxial Adapters, In-Series

DESCRIPTION

"KPC292MF, FF, and MM" are small size, low SWR, and low loss coaxial adapters. They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 40 GHz
SWR	< 1.15 (MF&MM) < 1.20 (FF)
Insertion Loss	< 0.2 dB
Electrical Length	17.5 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

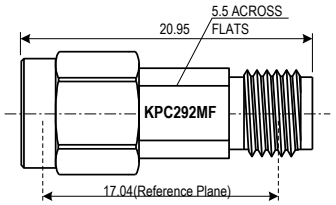
Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time for Shipping

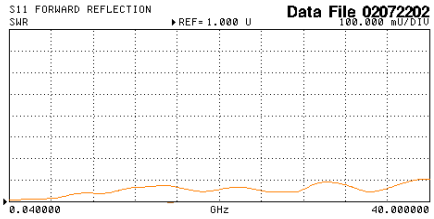
Typical Performance

TYPE: KPC292MF

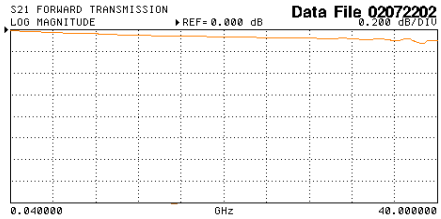
2.92 mm Male/2.92 mm Female



SWR

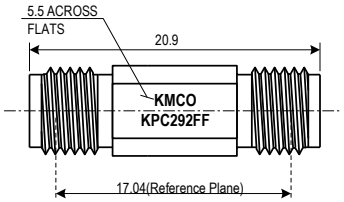


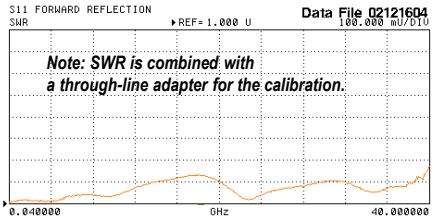
Insertion Loss

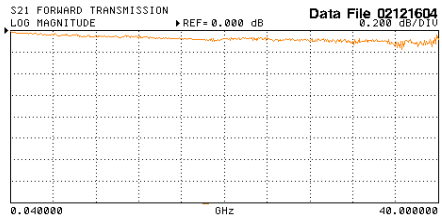


TYPE: KPC292FF

2.92 mm Female/2.92 mm Female

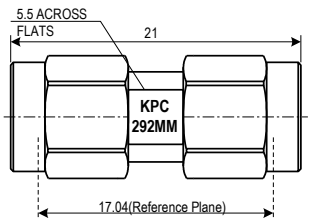


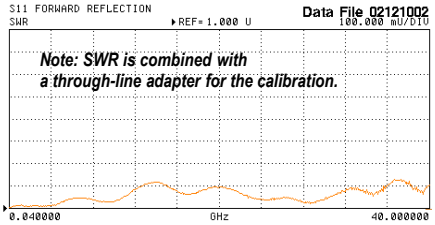


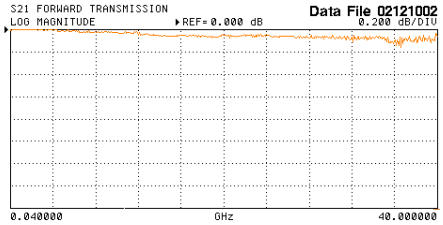


TYPE: KPC292MM

2.92 mm Male/2.92 mm Male

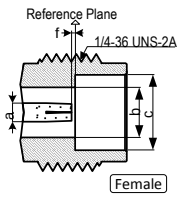


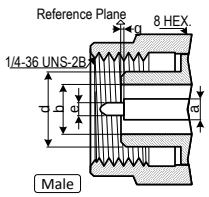




Interface Mating Dimensions of KPC292 (2.92 mm Connectors)

KPC292(2.92 mm)	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050





NOTE:
All dimensions are in millimeters.

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO **Kawashima Manufacturing Co., Ltd.**
ISO9001:14001 Certified
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073
http://www.kmco.biz/
FAX: +81-44-911-9621
e-mail: sales@kmco.co.jp

3.5 mm/3.5 mm

DC - 26.5 GHz, Coaxial Adapters, In-Series

DESCRIPTION

"KPC350MF, FF, and MM" are small size, low SWR, and low loss coaxial adapters. They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 26.5 GHz (Moding: 34 GHz)
SWR	< 1.15
Insertion Loss	< 0.2 dB
Electrical Length	17.5 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

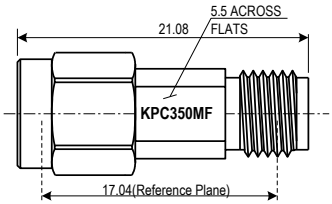
Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time for Shipping

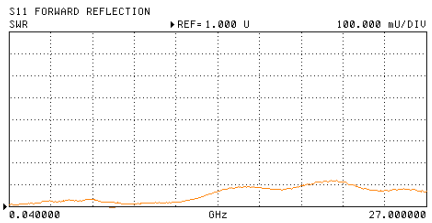
Typical Performance

TYPE: KPC350MF

3.5 mm Male/3.5 mm Female

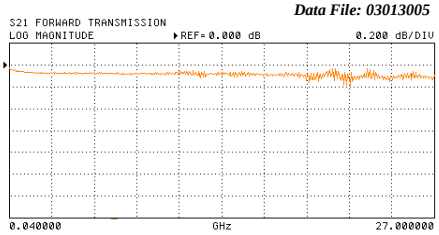


SWR



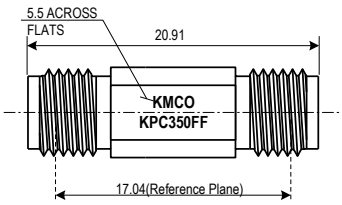
Insertion Loss

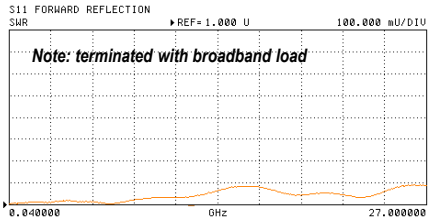
Data File: 03013005



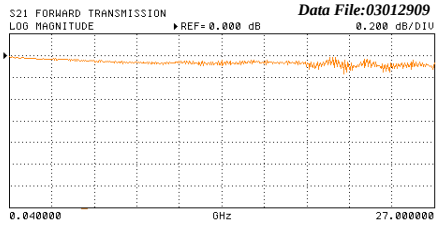
TYPE: KPC350FF

3.5 mm Female/3.5 mm Female



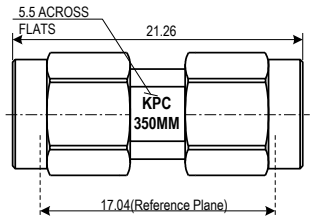


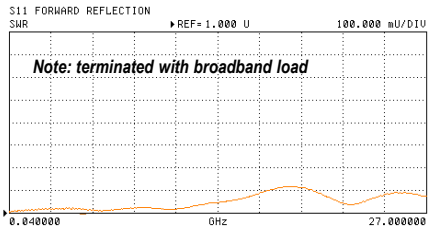
Data File:03012909



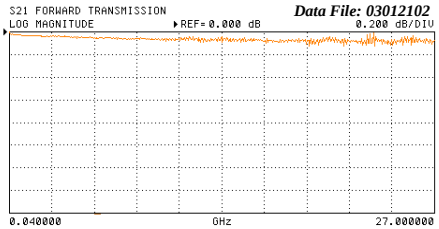
TYPE: KPC350MM

3.5 mm Male/3.5 mm Male

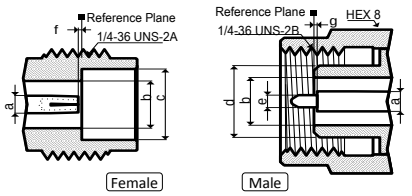




Data File: 03012102



Interface Mating Dimensions of KPC350 (3.5 mm Connectors <*>)



KPC350(3.5 mm)	
a	ϕ 1.520
b	ϕ 3.500
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050

NOTE:
All dimensions are in millimeters.

<*> Matable with 2.92 mm connectors and SMA

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO **Kawashima Manufacturing Co., Ltd.**
ISO9001:14001 Certified
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

1.85 mm/1 mm

DC - 67 GHz, Coaxial Adapters, Between-Series

DESCRIPTION

"KPC185F100F, KPC185F100M, KPC185M100F, and KPC185M100M" coaxial adapters between 1.85 mm and 1.00 mm are small size, low SWR, and low loss.
They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

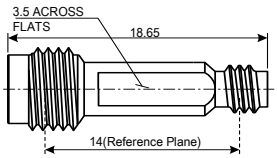
Electrical:

Frequency Range	DC - 67 GHz
SWR	< 1.4 (1)
Insertion Loss	< 0.6 dB (1)
Electrical Length	14.6 mm (Nominal)
Temperature Range	-55 to +125 °C

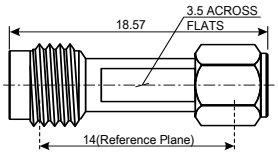
Mechanical:

Body and Outer Conductor	Gold Plated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm for KPC185 (Nominal) 45 N-cm for KPC100 (Nominal)
Connect/Disconnect Life	> 500 Cycles (Estimate)

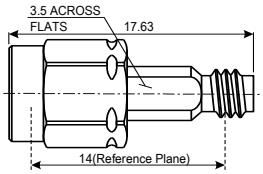
TYPE: KPC185F100F
1.85 mm Female/1 mm Female



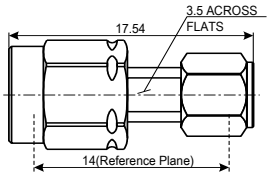
TYPE: KPC185F100M
1.85 mm Female/1 mm Male



TYPE: KPC185M100F
1.85 mm Male/1 mm Female



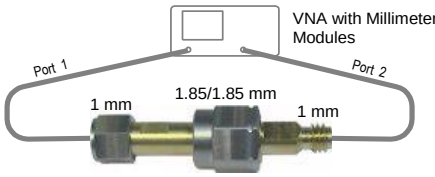
TYPE: KPC185M100M
1.85 mm Male/1 mm Male



RoHS Compliant

REACH Compliant

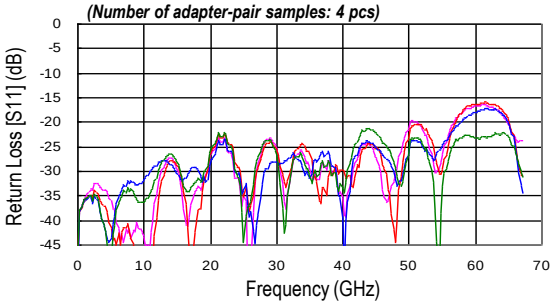
Performance Test Configuration

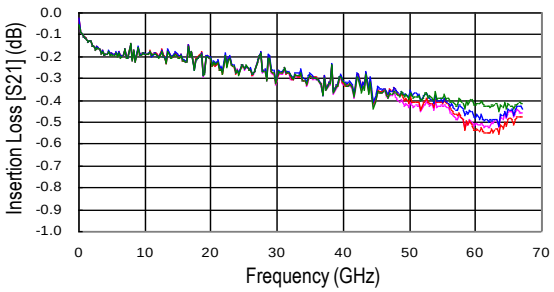


(Adapter Pair: Insertable-Device)

Typical Performance

(Number of adapter-pair samples: 4 pcs)

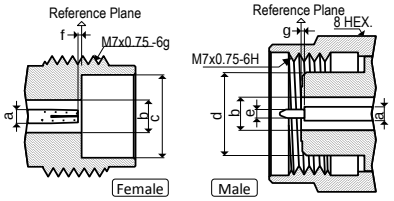




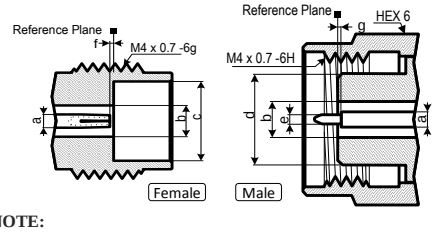
Interface Mating Dimensions

KPC185 (1.85 mm Connectors)

KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050



KPC100 (1 mm Connectors)



KPC100(1 mm)	
a	ϕ 0.434
b	ϕ 1.000
c	ϕ 2.390
d	ϕ 2.358
e	ϕ 0.250
f	0-0.013
g	0-0.013

NOTE:
All dimensions are in millimeters.
(1) 1 mm ports were measured for the measurement of return and insertion loss of the adapters with 1.8 mm ports mated as an interface.

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

2.4 mm/1.85 mm

DC - 50 GHz, Coaxial Adapters, Between-Series

DESCRIPTION

"KPC240F185F, KPC240F185M, KPC240M185F, and KPC240M185M" coaxial adapters between 2.4 mm and 1.85 mm are small size, low SWR, and low loss.
They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

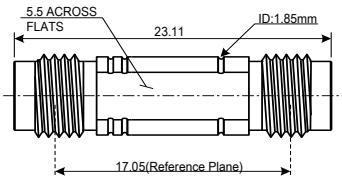
Frequency Range	DC - 50 GHz
SWR	< 1.25 (*)
Insertion Loss	< 0.4 dB (**)
Electrical Length	17.5 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

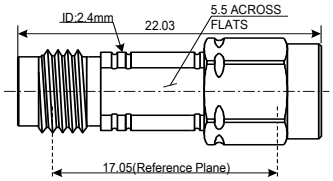
Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time for Shipping

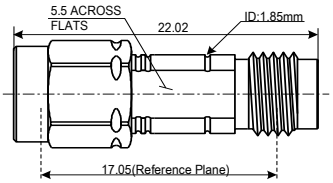
TYPE: KPC240F185F
2.4 mm Female/1.85 mm Female



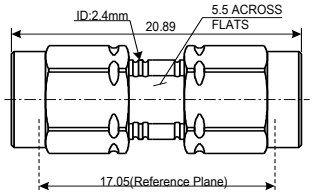
TYPE: KPC240F185M
2.4 mm Female/1.85 mm Male



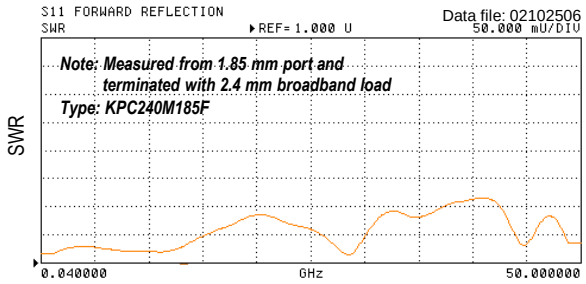
TYPE: KPC240M185F
2.4 mm Male/1.85 mm Female

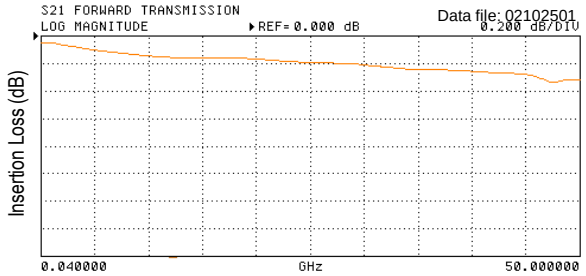


TYPE: KPC240M185M
2.4 mm Male/1.85 mm Male



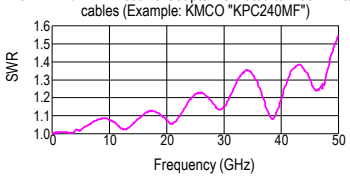
Typical Performance



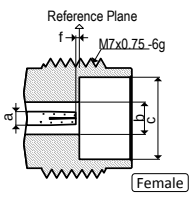


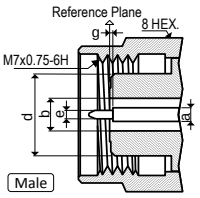
These adapters are designed to eliminate SWR degradation as shown in the below chart.

This 2.4 mm/2.4 mm coaxial adapter is mated to 1.85 mm test port cables (Example: KMCO "KPC240MF")



Interface Mating Dimensions of KPC240 (2.4 mm Connectors) and KPC185 (1.85 mm Connectors)





KPC240(2.4 mm)	
a	ϕ 1.042
b	ϕ 2.400
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

NOTE:
All dimensions are in millimeters.

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

2.92 mm/1.85 mm

DC - 40 GHz, Coaxial Adapters, Between-Series

DESCRIPTION

"KPC292F185F, KPC292F185M, KPC292M185F, and KPC292M185M" coaxial adapters between 2.92 mm and 1.85 mm are small size, low SWR, and low loss.
They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

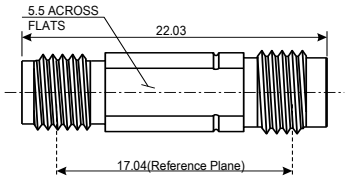
Frequency Range	DC - 40 GHz
SWR	< 1.3
Insertion Loss	< 0.35 dB
Electrical Length	17.5 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

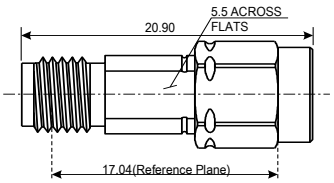
Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time for Shipping

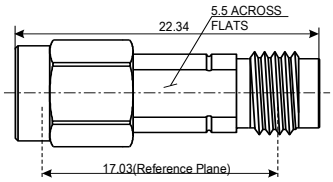
TYPE: KPC292F185F
2.92 mm Female/1.85 mm Female



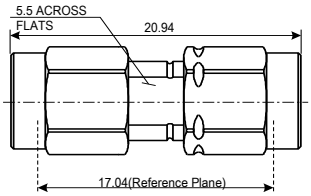
TYPE: KPC292F185M
2.92 mm Female/1.85 mm Male



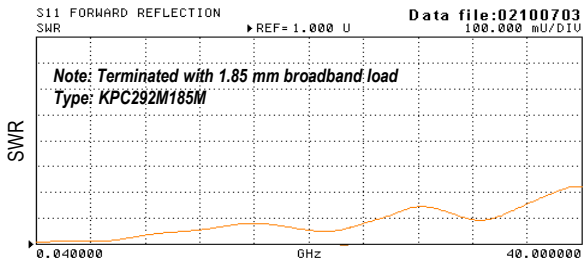
TYPE: KPC292M185F
2.92 mm Male/1.85 mm Female

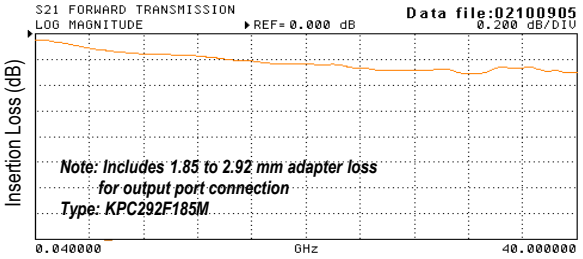


TYPE: KPC292M185M
2.92 mm Male/1.85 mm Male



Typical Performance



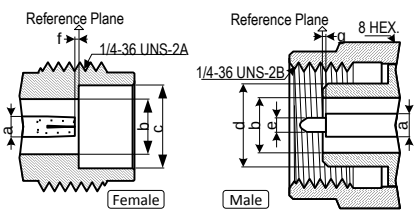


RoHS Compliant

REACH Compliant

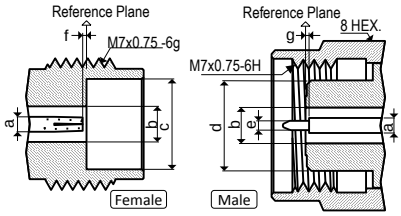
Interface Mating Dimensions

KPC292 (2.92 mm Connectors)



KPC292(2.92 mm)	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050

KPC185 (1.85 mm Connectors <*>)



KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

NOTE:
All dimensions are in millimeters.

<*> Matable with 2.4 mm connectors

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

2.92 mm/2.4 mm

DC - 40 GHz, Coaxial Adapters, Between-Series

DESCRIPTION

"KPC292F240F, KPC292F240M, KPC292M240F, and KPC292M240M" coaxial adapters between 2.92 mm and 2.4 mm are small size, low SWR, and low loss.

They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

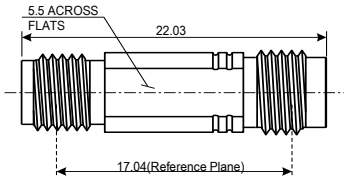
Frequency Range	DC - 40 GHz
SWR	< 1.22
Insertion Loss	< 0.25 dB
Electrical Length	17.5 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

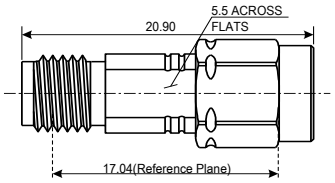
Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time for Shipping

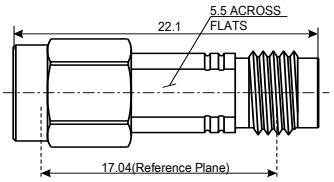
TYPE: KPC292F240F
2.92 mm Female/2.4 mm Female



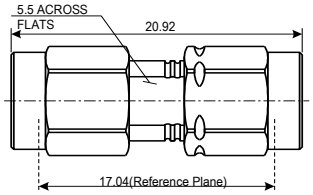
TYPE: KPC292F240M
2.92 mm Female/2.4 mm Male



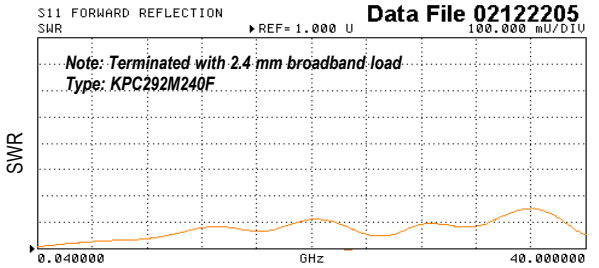
TYPE: KPC292M240F
2.92 mm Male/2.4 mm Female

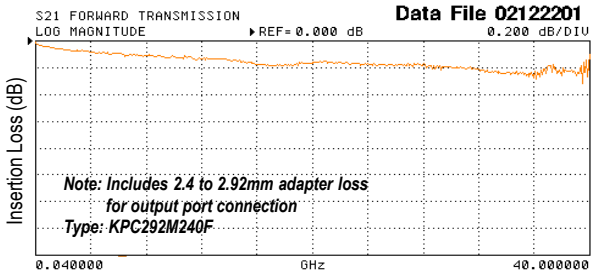


TYPE: KPC292M240M
2.92 mm Male/2.4 mm Male



Typical Performance



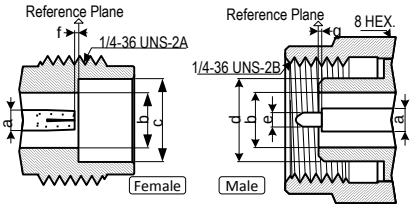


RoHS Compliant

REACH Compliant

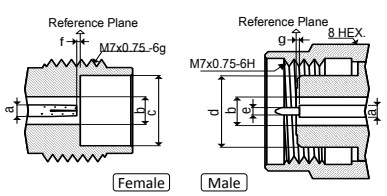
Interface Mating Dimensions

KPC292 (2.92 mm Connectors)



KPC292(2.92 mm)	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050

KPC240 (2.4 mm Connectors)



KPC240(2.4 mm)	
a	ϕ 1.042
b	ϕ 2.400
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

NOTE:
All dimensions are in millimeters.

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073
http://www.kmco.biz/
FAX: +81-44-911-9621
e-mail: sales@kmco.co.jp

3.5 mm/2.4 mm

DC - 26.5 GHz, Coaxial Adapters, Between-Series

DESCRIPTION

"KPC350F240F, KPC350F240M, KPC350M240F, and KPC350M240M" coaxial adapters between 3.5 mm and 2.4 mm are small size, low SWR, and low loss.
They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

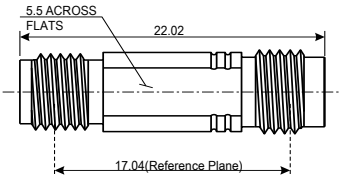
Frequency Range	DC - 26.5 GHz (Moding: 34GHz)
SWR	< 1.2
Insertion Loss	< 0.3 dB
Electrical Length	17.5 mm (Nominal)
Temperature Range	-55 to +125 ˚C

Mechanical:

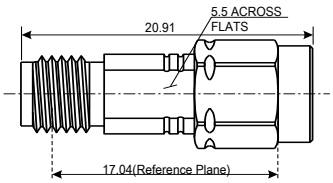
Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time for Shipping

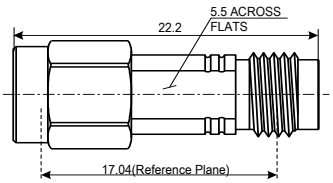
TYPE: KPC350F240F
3.5 mm Female/2.4 mm Female



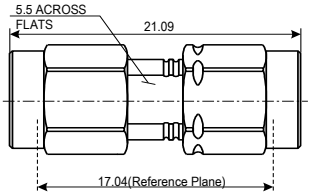
TYPE: KPC350F240M
3.5 mm Female/2.4 mm Male



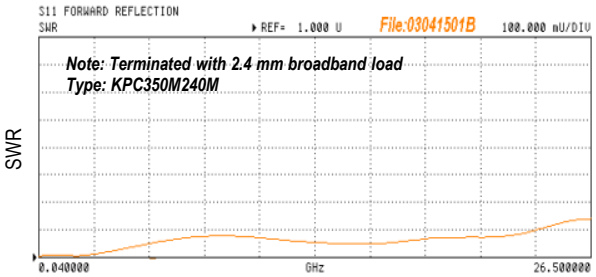
TYPE: KPC350M240F
3.5 mm Male/2.4 mm Female

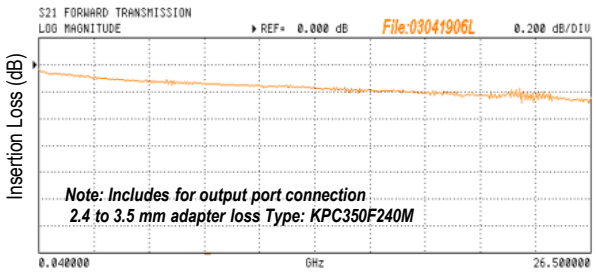


TYPE: KPC350M240M
3.5 mm Male/2.4 mm Male



Typical Performance





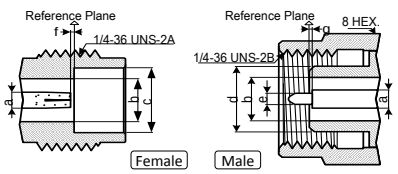
RoHS Compliant

REACH Compliant

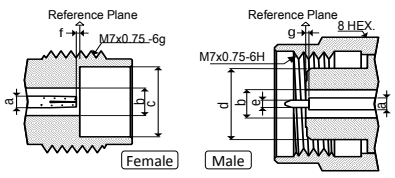
Interface Mating Dimensions

KPC350 (3.5 mm Connectors)

KPC350(3.5 mm)	
a	ϕ 1.520
b	ϕ 3.500
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050



KPC240 (2.4 mm Connectors <*>)



KPC240(2.4 mm)	
a	ϕ 1.042
b	ϕ 2.400
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

NOTE:
All dimensions are in millimeters.

<*> Matable with 1.85 mm connectors

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073
http://www.kmco.biz/
FAX: +81-44-911-9621
e-mail: sales@kmco.co.jp

1.85 mm/1.85 mm Panel Adapter, In-Series

DC - 65 GHz, Coaxial Panel Adapters for Front Access Ports

DESCRIPTION

"KPC185MF FPA" coaxial front panel adapter is easy to mate, low SWR, and low insertion loss. It is designed for frequently connected/disconnected broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 65 GHz
SWR	< 1.3
Insertion Loss	< 0.5 dB
Electrical Length	Shown below (Nominal)
Temperature Range	-55 to +125 ˚C

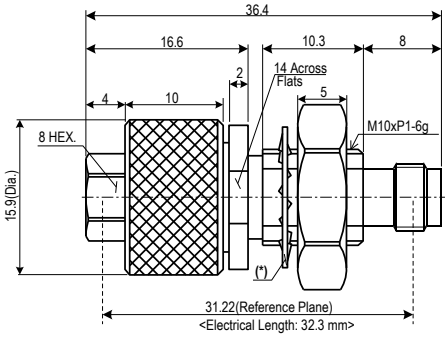
Mechanical:

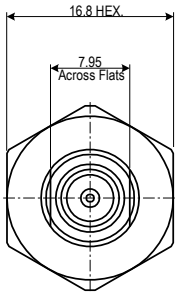
Body	Passivated Stainless Steel (*)
Outer Conductor	Gold Plated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
3 Weeks Lead-Time
for Shipping

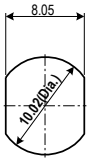
TYPE: KPC185MF FPA

1.85 mm Male/1.85 mm Female





Mounting Hole and Thickness
(Recommended)

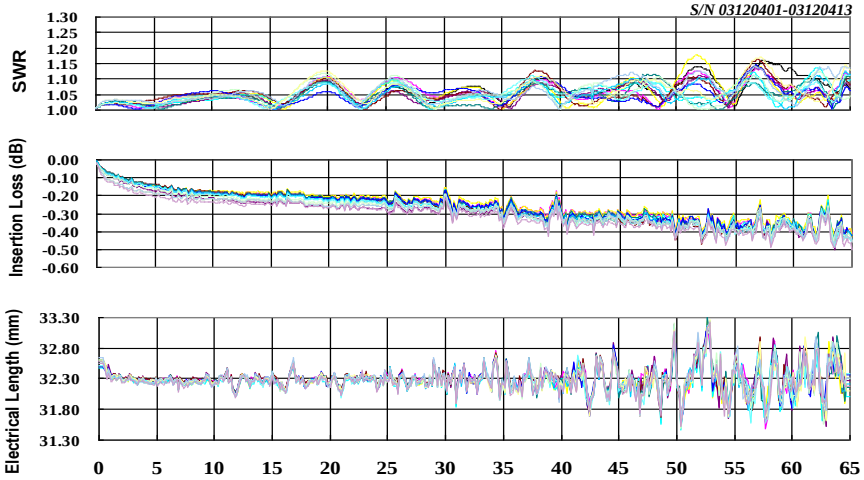


Thickness: 2 to 5.4 mm

Typical Performance

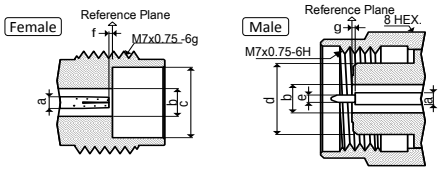
Number of Samples: 13 pcs

S/N 03120401-03120413



Interface Mating Dimensions of KPC185MF FPA (1.85 mm Connectors <*>)

KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050



<*> Matable with 2.4 mm connectors

RoHS Compliant

REACH Compliant

NOTE:
All dimensions are in millimeters.
(*)Toothed lockwasher is nickel-plated steel.

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO Kawashima Manufacturing Co., Ltd.
ISO9001:14001 Certified
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

2.92 mm/2.92 mm Panel Adapter, In-Series

DC - 40 GHz, Coaxial Panel Adapters for Front Access Ports

DESCRIPTION

"KPC292MF FPA" coaxial front panel adapter is easy to mate, good return loss, and low insertion loss.
It is designed for frequently connected/disconnected broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 40 GHz
SWR	< 1.15
Insertion Loss	< 0.3 dB
Electrical Length	Shown below (Nominal)
Temperature Range	-55 to +125 ˚C

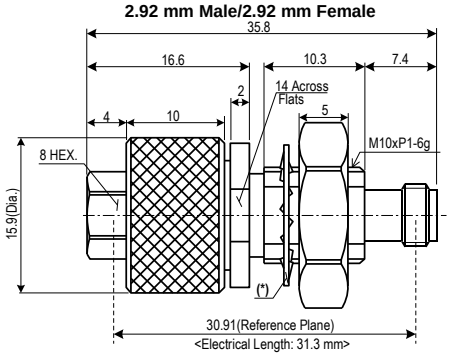
Mechanical:

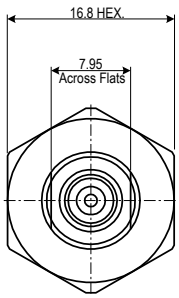
Body	Passivated Stainless Steel (*)
Outer Conductor	Gold Plated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
3 Weeks Lead-Time
for Shipping

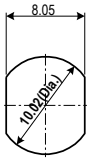
TYPE: KPC292MF FPA

2.92 mm Male/2.92 mm Female





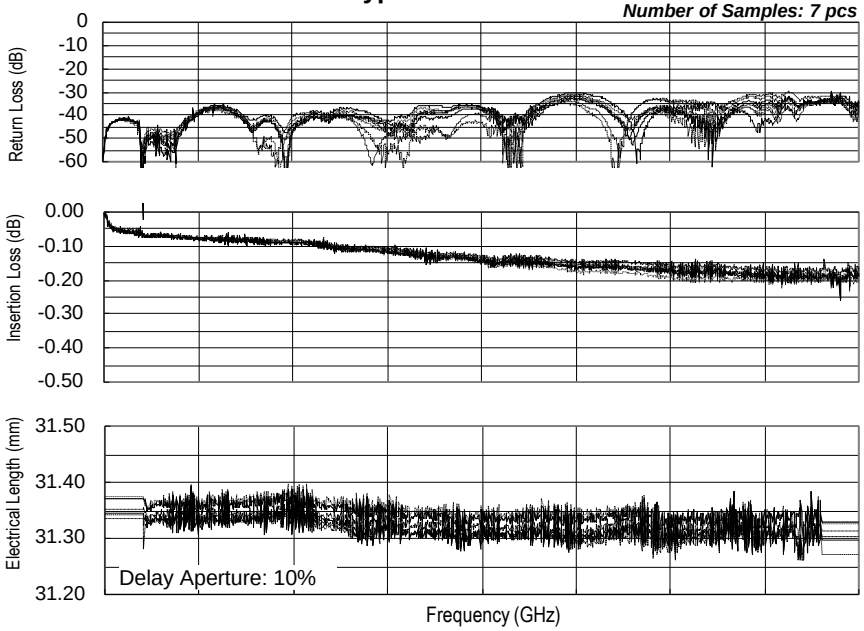
Mounting Hole and Thickness
(Recommended)



Thickness: 2 to 5.4 mm

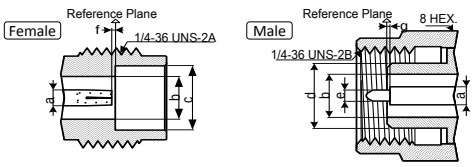
Typical Performance

Number of Samples: 7 pcs



Interface Mating Dimensions of KPC292MF FPA (2.92 mm Connectors <*>)

KPC292(2.92 mm)	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050



NOTE:
All dimensions are in millimeters.
(*)Toothed lockwasher is nickel-plated steel.

RoHS Compliant

REACH Compliant

<*> Matable with 3.5 mm connectors and SMA

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO Kawashima Manufacturing Co., Ltd.
ISO9001:14001 Certified
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

Panel Adapter, In Series

1.85 mm for DC - 65 GHz, 2.92 mm for 40 GHz Coaxial Panel Adapters

DESCRIPTION

"KPC185FFPA and KPC292FFPA" coaxial panel adapters are 9.5 mm "D"-holed panel mountable, low SWR, and low loss.
They are designed for broadband measurement, instrument, and system applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 65 GHz (1.85 mm) DC - 40 GHz (2.92 mm)
SWR	< 1.3 (1.85 mm) < 1.15 (2.92 mm)
Insertion Loss	< 0.4 dB (1.85 mm) < 0.25 dB (2.92 mm)
Electrical Length	Shown below (Nominal)
Temperature Range	-55 to +125 °C

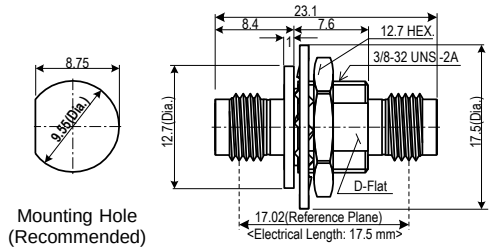
Mechanical:

Body	Passivated Stainless Steel (*)
Outer Conductor	Passivated Stainless Steel (1.85 mm) (*) Gold Plated Stainless Steel (2.92 mm)
Inner Conductor	Gold Plated Beryllium Copper and Brass (1.85 mm) Gold Plated Beryllium Copper (2.92 mm)
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Production Status
2 Weeks Lead-Time
for Shipping

TYPE: KPC185FFPA

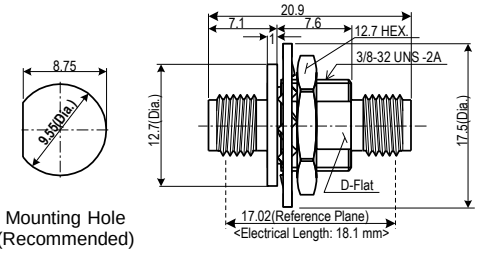
1.85 mm Female/1.85 mm Female



Mounting Hole
(Recommended)

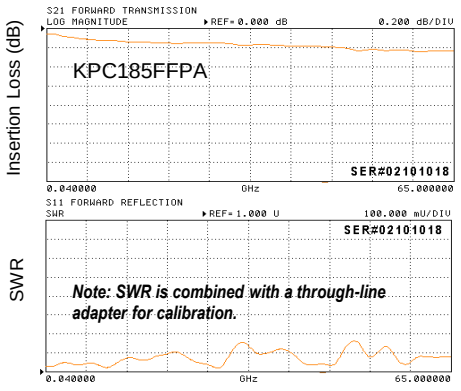
TYPE: KPC292FFPA

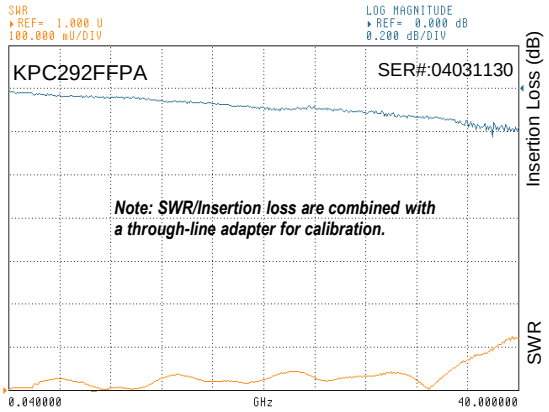
2.92 mm Female/2.92 mm Female



Mounting Hole
(Recommended)

Typical Performance





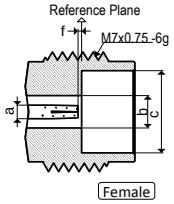
RoHS Compliant

REACH Compliant

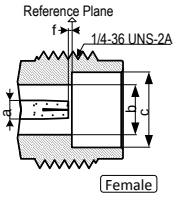
Interface Mating Dimensions

KPC185 (1.85 mm Connectors <*>)

KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050



KPC292 (2.92 mm Connectors)



KPC292(2.92 mm)	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050

<*> Matable with 2.4 mm connectors

NOTE:

All dimensions are in millimeters.
(*)Toothed lockwasher is chromate-converted zinc-plated steel.

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified **Kawashima Manufacturing Co., Ltd.**
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

DC - 65 GHz/40 GHz Panel Adapters, Between

1.85 mm/SMPM and 2.92 mm/SMPM Panel Adapters

DESCRIPTION

"KPC185F-SMPM-FD-PA and "KPC292F-SMPM-FD-PA" coaxial panel adapters are 9.5 mm "D"-holed panel mountable, low SWR, and low loss.
They are designed for broadband measurement, instrument, and system applications.

Connector Interfaces

- 1.85 mm and 2.92 mm connectors conform to IEEE-Std-287.
- SMPM male full detent interface is as per MIL-STD-348A 328.2.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 65 GHz (1.85 mm) DC - 40 GHz (2.92 mm)
SWR	< 1.5
Insertion Loss	< 0.7 dB
Temperature Range	-55 to +125 ˚C

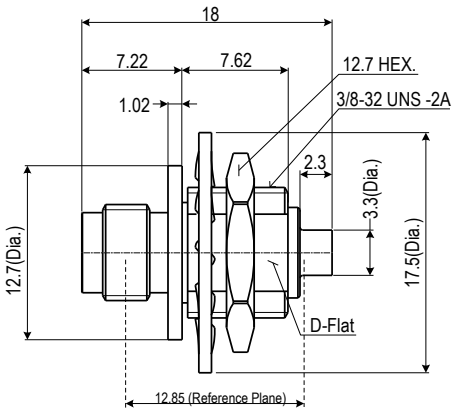
Mechanical:

Body and Outer Conductor	Passivated Stainless Steel (*)
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 100 Cycles (Estimate for SMPM)

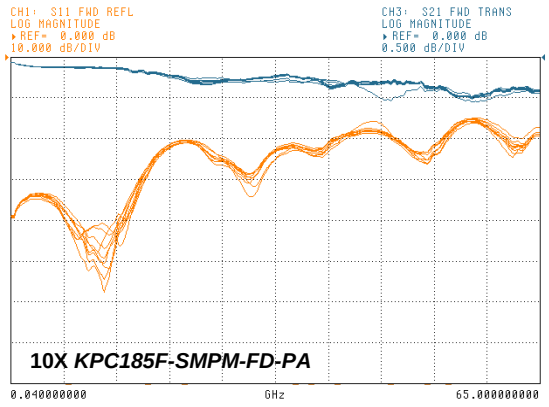
Production Status
2 Weeks Lead-Time for Shipping

TYPE: KPC185F-SMPM-FD-PA

1.85 mm Female/SMPM-Male (Full detent)

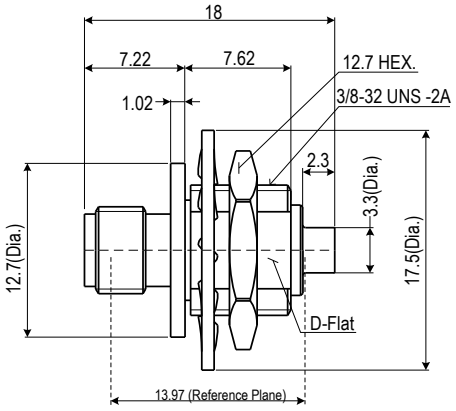


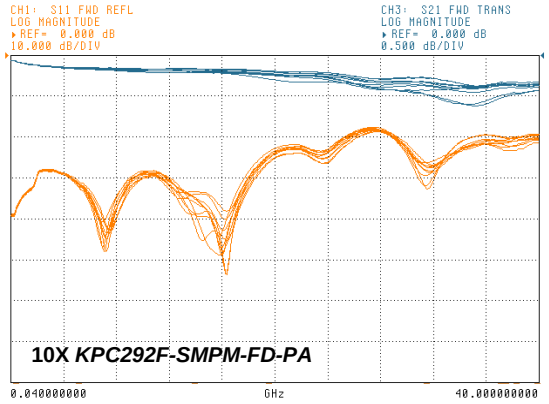
Typical Performance including coaxial adapters for SMPM

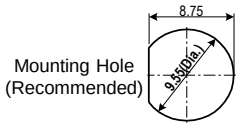


TYPE: KPC292F-SMPM-FD-PA

2.92 mm Female/SMPM-Male (Full detent)







NOTE:
All dimensions are in millimeters.
(*) Toothed lockwasher is chromate-converted zinc-plated steel.

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073
http://www.kmco.biz/
FAX: +81-44-911-9621
e-mail: sales@kmco.co.jp

DC - 20 GHz Panel Adapter, In-Series

SMA Coaxial Panel Adapters

DESCRIPTION

"SMA-FFPA" coaxial panel adapter is 9.5 mm "D"-holed panel mountable. It is designed for telecommunication systems and test equipment.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 20 GHz (*)
SWR	< 1.2
Insertion Loss	< 0.1 dB
Input Power	10 W (max)
Temperature Range	-55 to +85 ˚C

Connector Interface Standard:

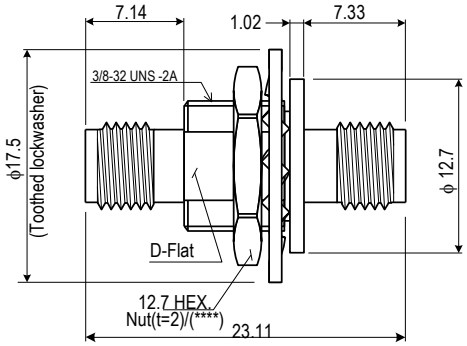
- MIL-C-39012
- MIL-STD-348A
- IEC Std-169-15

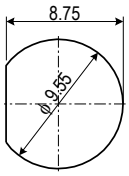
Mechanical:

Outer Conductor	Passivated Stainless Steel (**)
Inner Conductor	Gold Plated Beryllium Copper
Coupling Torque	56 N-cm (Nominal)
Connect/Disconnect Life	> 5,000 Cycles (***)

TYPE: SMA-FFPA

Female/Female Outline

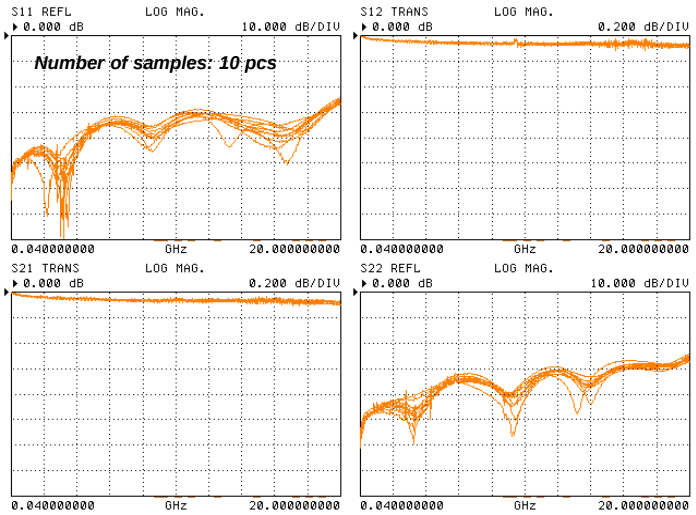




Mounting Hole
(Recommended)

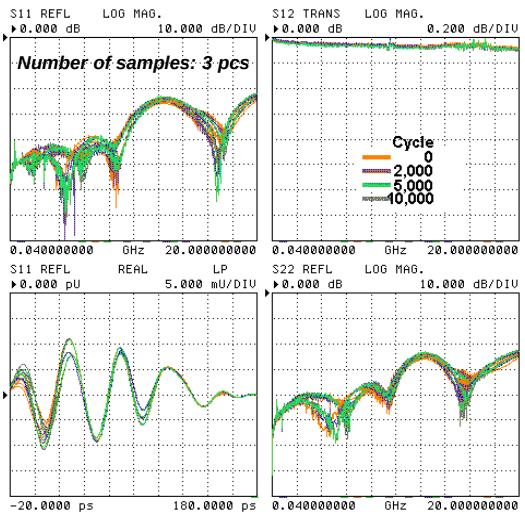
RF Performance

("Non-Insertable Device" Calibration)



Connect/Disconnect Life

("Non-Insertable Device" Calibration
with Time Domain Measurement)



NOTE:

All dimensions are in millimeters.

(*) Moding frequency: 24.7 GHz (theoretically)

(**) Toothed lockwasher is chromate (trivalent) converted zinc-plated steel

(***) Connect/disconnect speed: 10 cycles per minute (conforms to MIL-C-39012/60)

(****) Recommended tightening torque: 300 to 420 N-cm

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO
ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073
http://www.kmco.biz/
FAX: +81-44-911-9621
e-mail: sales@kmco.co.jp

90 degree Angled-Swept Adaptor, Male to Female

SMA Coaxial Adapters

DESCRIPTION

"SMA-525S" 90 degree angled-swept adapter is designed for telecommunication systems and test equipment.

Connector Interface Standard:

- MIL-C-39012
- MIL-STD-348A
- IEC Std-169-15

SPECIFICATIONS

Electrical:

Frequency Range	DC - 24.6 GHz (*)
SWR	< 1.25 (to 20 GHz) < 1.5 (to 24.6 GHz)
Insertion Loss	< 0.15 dB (to 20 GHz) < 0.23 dB (to 24.6 GHz)
Input Power	10 W (max)
Temperature Range	-55 to +85 ˚C

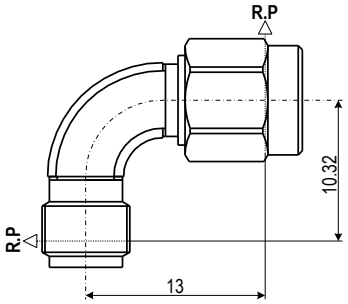
Mechanical:

Outer Conductor	Nickel Plated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper
Coupling Torque	56 N-cm (Nominal)
Connect/Disconnect Life	> 500 Cycles (**)

Production Status
2 Weeks Lead-Time for Shipping

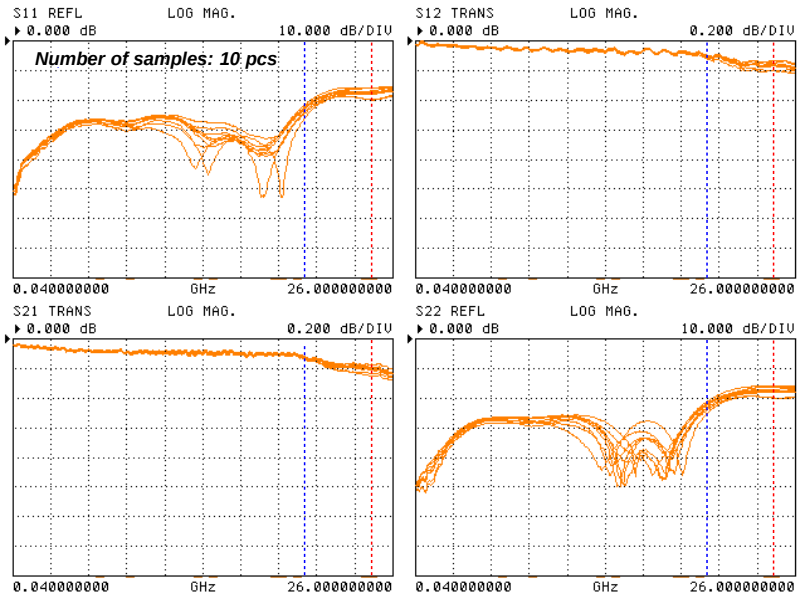
TYPE: SMA-525S

Male/Female Outline



RF Performance

("Insertable Device" Calibration in 3.5 mm System)



NOTE:

All dimensions are in millimeters.

(*) Moding frequency: 24.7 GHz (theoretically)

(**) Connect/disconnect speed: 10 cycles per minute (conforms to MIL-C-39012/60)

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified

Kawashima Manufacturing Co., Ltd.

1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN

TEL: +81-44-911-7073 http://www.kmco.biz/

FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

株式会社 川島製作所
214-0031 川崎市多摩区東生田1-3-5
Tel: 044-911-7073 Fax: 044-911-9621
http://www.kmco.co.jp/ E-mail: sales-j@kmco.co.jp

Coaxial Hermetic Adapters, Within (Conform to IEEE-Std-287)

1.85 mm Up to 65 GHz

2.92 mm Up to 40 GHz

Optical Hermetic Adapters

Connector Interface: Conform to IEC-61754-13
Type FC-PC Connector Family

Subject to Change Without Notice

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

1.85 mm/1.85 mm

DC - 65 GHz, Hermetically Sealed, Coaxial Adapters

DESCRIPTION

"KPC185FFHA" is hermetically sealed 1.85 mm to 1.85 mm coaxial adapter that is;
-Low SWR and low loss
-Hermetic RF interface between vacuum and atmosphere environment
-Small mounting space
It is designed for broadband devices, instrument, and component testing applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 65 GHz
SWR	< 1.5
Insertion Loss	< 0.7 dB
Electrical Length	Shown below (Nominal)
Temperature Range	-55 to +125 °C

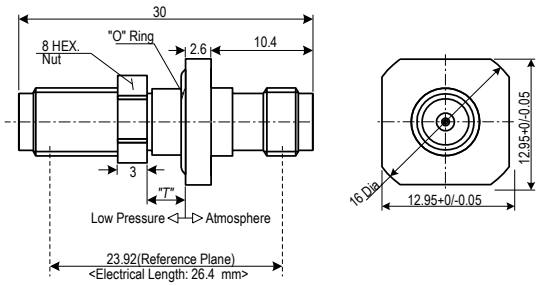
Mechanical:

Body and Outer Conductor	Gold Plated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper
Inner and Outer Conductor for Seal	Gold Plated Fe/Ni/Co Alloy (KOVAR)
Insulator for Seal	#7070 Glass (Corning)
Gasket for Flange Seal	Fluoroelastomer "O" Ring
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles
He Leak Rate (*)	< $1x10^{-10}$ Pam^3/sec (< $1x10^{-9}$ atm cc /sec)

Production Status
4 Weeks Lead-Time for Shipping

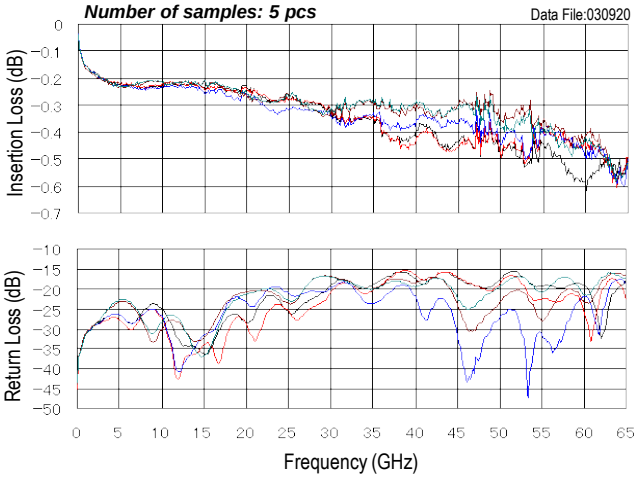
TYPE: KPC185FFHA

1.85 mm Female/1.85 mm Female

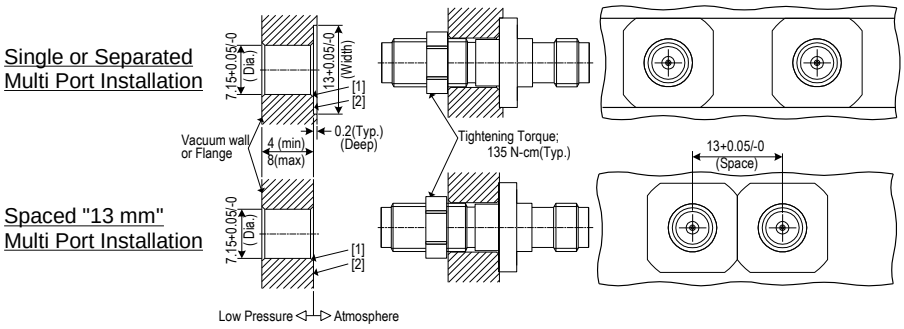


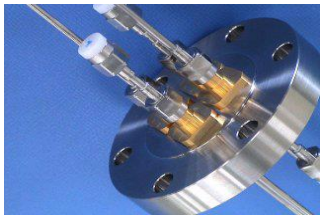
"T" : Vacuum wall or flange thickness: 4 mm (min) to 8 mm (max)

Typical Performance



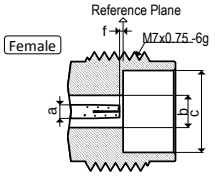
Recommended Mounting Hole and Installation





Example of 4 Adapters Mounted to 70 mm diameter. Vacuum Flange

Interface Mating Dimensions of KPC185 (1.85 mm Connectors <*>)



KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	------
e	------
f	0-0.050
g	------

<*> Matable with 2.4 mm connectors

NOTE:
All dimensions are in millimeters.
[1] Corners: < 0.05 x 0.05 mm
[2] "Smooth surface" required
(*) As Per MIL-STD-883E, METHOD1014.10, Test Condition A4

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

2.92 mm/2.92 mm

DC - 40 GHz, Hermetically Sealed, Coaxial Adapters

DESCRIPTION

"KPC292FFHA" is hermetically sealed 2.92 mm to 2.92 mm coaxial adapter that is;
-Low SWR and low loss
-Hermetic RF interface between vacuum and atmosphere environment
-Small mounting space
It is designed for broadband devices, instrument, and component testing applications.

SPECIFICATIONS

Electrical:

Frequency Range	DC - 40 GHz
SWR	< 1.5
Insertion Loss	< 0.45 dB
Electrical Length	Below (Nominal)
Temperature Range	-55 to +125 °C

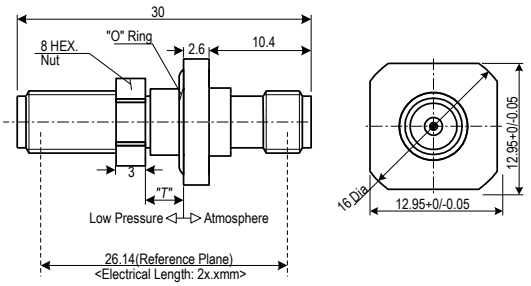
Mechanical:

Body and Outer Conductor	Gold Plated Stainless Steel and Brass
Inner Conductor	Gold Plated Beryllium Copper
Inner and Outer Conductor for Seal	Gold Plated Fe/Ni/Co Alloy (KOVAR)
Insulator for Seal	#7070 Glass (Corning)
Gasket for Flange Seal	Fluoroelastomer "O" Ring
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles
He Leak Rate (*)	< $1x10^{-10}$ Pam^3/sec (< $1x10^{-9}$ atm cc /sec)

Production Status
4 Weeks Lead-Time for Shipping

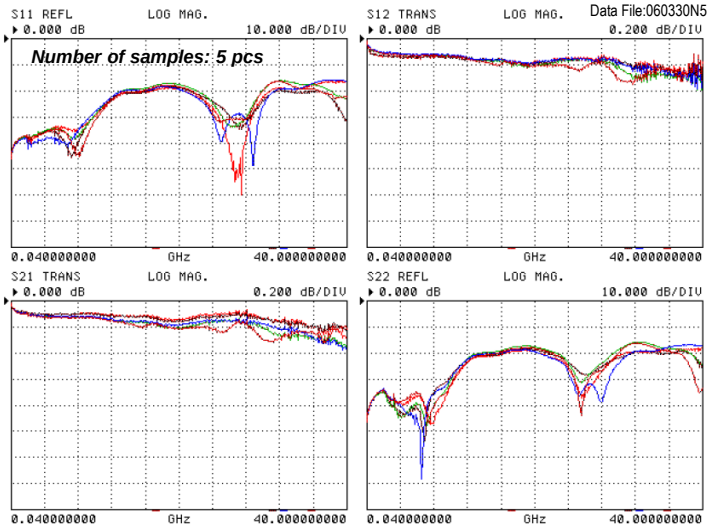
TYPE: KPC292FFHA

2.92 mm Female/2.92 mm Female

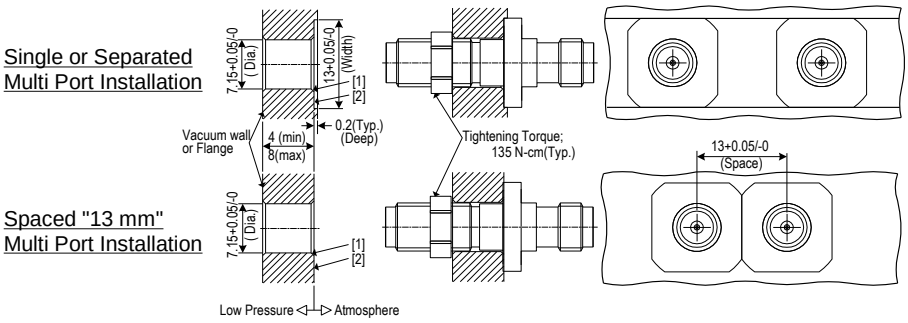


"T" : Vacuum wall or flange thickness: 4 mm (min) to 8 mm (max)

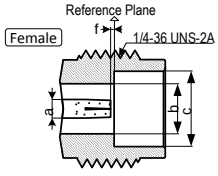
Typical Performance



Recommended Mounting Hole and Installation



Interface Mating Dimensions of KPC292 (2.92 mm Connectors <*>)



KPC292(2.92 mm)	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	------
e	------
f	0-0.050
g	------

<*> Matable with 3.5 mm and SMA

NOTE:
All dimensions are in millimeters.
[1] Chamfer: < 0.05 mm
[2] "Smooth surface" required
(*) As Per MIL-STD-883E, METHOD1014.10, Test Condition A4

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

株式会社 川島製作所
214-0031 川崎市多摩区東生田1-3-5
Tel: 044-911-7073 Fax: 044-911-9621
http://www.kmco.co.jp/ E-mail: sales-j@kmco.co.jp

2-Hole Flange Launchers (Conform to IEEE-Std-287)

1 mm Up to 110 GHz

1.85 mm Up to 65 GHz

2.92 mm Up to 40 GHz

Subject to Change Without Notice

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

1 mm

DC - 110 GHz, Flange Launchers

DESCRIPTION

"KPC100F311 and KPC100M311" flange launchers are designed for ultra-broadband devices and units with coaxial I/O interfaces.

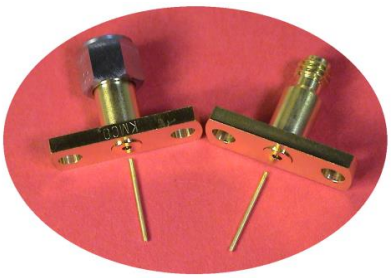
SPECIFICATIONS

Electrical:

Frequency Range	DC - 110 GHz
SWR	< 1.5 (*)
Insertion Loss	< 0.7 dB (*)
Electrical Length	11.1 mm (Nominal)
Temperature Range	-55 to +125 ˚C (1)

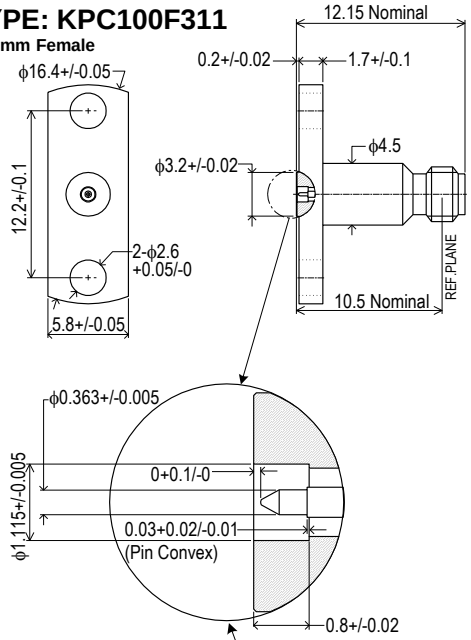
Mechanical:

Body and Outer Conductor	Gold Plated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	45 N-cm (Nominal)
Connect/Disconnect Life	> 500 Cycles (Estimate)



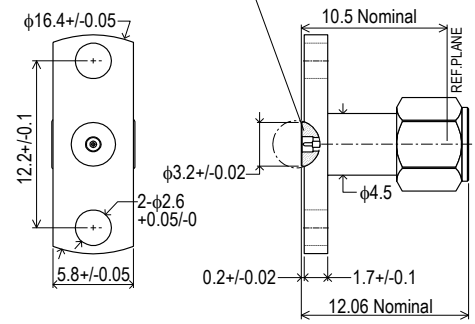
TYPE: KPC100F311

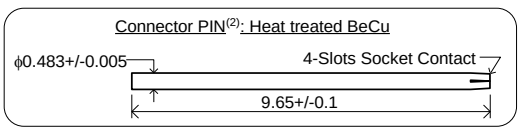
1 mm Female



TYPE: KPC100M311

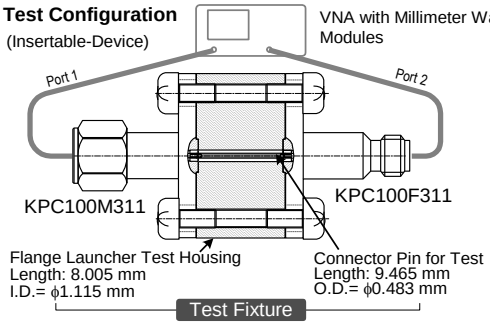
1 mm Male





Standard Test Configuration

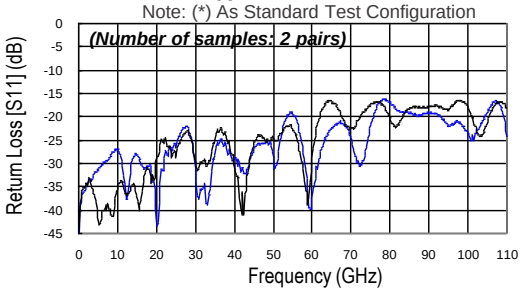
(Insertable-Device)

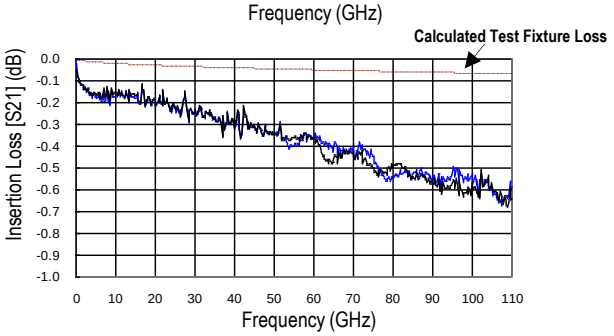


Typical Performance

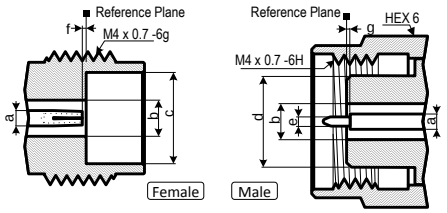
Note: (*) As Standard Test Configuration

(Number of samples: 2 pairs)





Interface Mating Dimensions of KPC100 (1 mm Connectors)



KPC100(1 mm)	
a	ϕ 0.434
b	ϕ 1.000
c	ϕ 2.390
d	ϕ 2.358
e	ϕ 0.250
f	0-0.013
g	0-0.013

RoHS Compliant

REACH Compliant

NOTE:

All dimensions are in millimeters.

(1) Temperature range, short period: 200℃

(2) The tip of the pin contacts with "pin convex" in a final assembly.

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified

Kawashima Manufacturing Co., Ltd.

1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN

TEL: +81-44-911-7073 http://www.kmco.biz/

FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

1.85 mm

DC - 65 GHz, Two-Hole Flange Launchers & Glass Beads

DESCRIPTION

"KPC185M302 and KPC185F302" two-hole flange launchers and **"GB185"** glass beads are designed for broadband devices and units with coaxial I/O interfaces.

SPECIFICATIONS

Connectors

Electrical:

Frequency Range	DC - 65 GHz
SWR	< 1.5 (*)
Temperature Range	-55 to +125 ˚C

Mechanical:

Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Glass Bead

Electrical:

Frequency Range	DC - 65 GHz
Temperature Range	-55 to +125 ˚C

Mechanical:

Body and Inner Conductor	Gold Plated (**) Fe/Ni/Co Alloy (KOVAR)
Insulator	#7070 Glass (Corning)

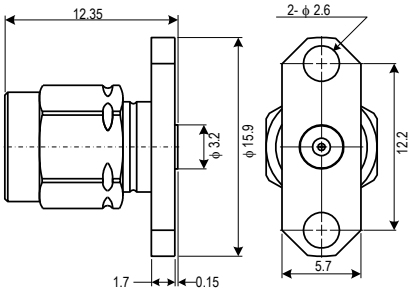
Others:

Soldering Temperature	330℃ (max)
He Leak Rate	< $1x10^{-10}$ Pam^3/sec

Production Status
2 Weeks Lead-Time for Shipping

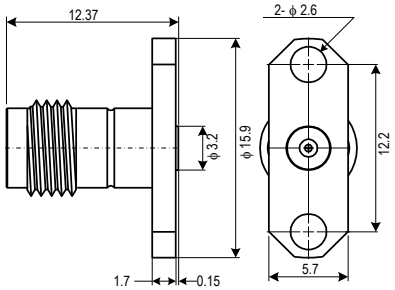
TYPE: KPC185M302

1.85 mm Male



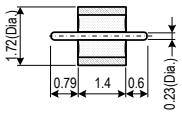
TYPE: KPC185F302

1.85 mm Female



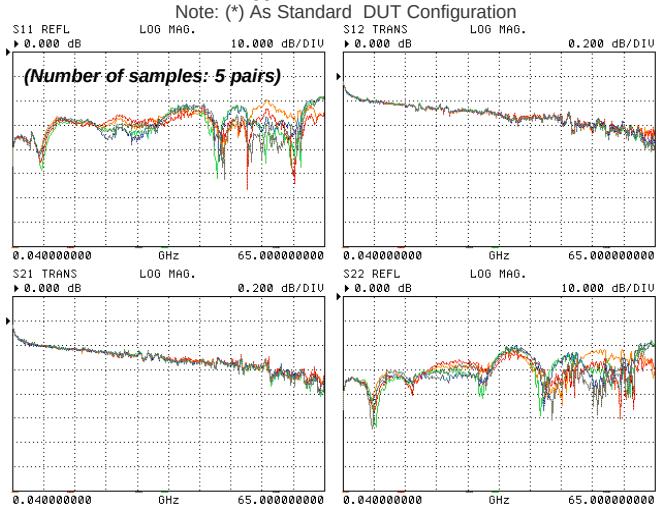
TYPE: GB185

Glass Bead

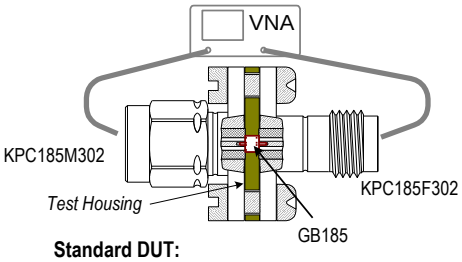


Typical Performance

Note: (*) As Standard DUT Configuration



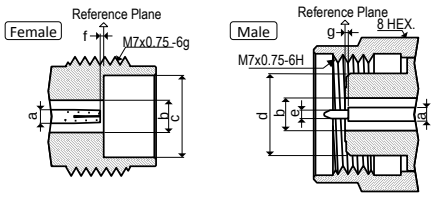
Test Configuration



Standard DUT:
Cascaded KPC185M302, GB185, and KPC185F302

Interface Mating Dimensions of KPC185 (1.85 mm Connectors <*>)

KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050



<*> Matable with 2.4 mm connectors

NOTE:
All dimensions are in millimeters.
(**) Thermo-sonic wire bondable gold plating

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

2.92 mm

DC - 40 GHz, Two-Hole Flange Launchers & Glass Beads

DESCRIPTION

"KPC292F302" two-hole flange launchers and **"GB292"** glass beads are designed for broadband devices and units with coaxial I/O interfaces.

SPECIFICATIONS

Connectors

Electrical:

Frequency Range	DC - 40 GHz
SWR	< 1.5 (*)
Temperature Range	-55 to +125 ˚C

Mechanical:

Body and Outer Conductor	Passivated Stainless Steel
Inner Conductor	Gold Plated Beryllium Copper and Brass
Coupling Torque	90 N-cm (Nominal)
Connect/Disconnect Life	> 1,000 Cycles

Glass Bead

Electrical:

Frequency Range	DC - 40 GHz
Temperature Range	-55 to +125 ˚C

Mechanical:

Body and Inner Conductor	Gold Plated (**) Fe/Ni/Co Alloy (KOVAR)
Insulator	#7070 Glass (Corning)

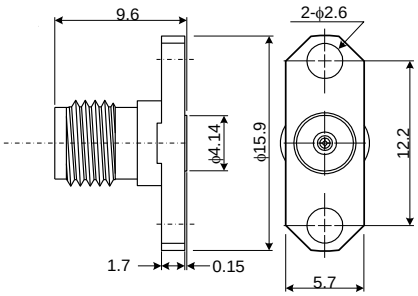
Others:

Soldering Temperature	330℃ (max)
He Leak Rate	< $1x10^{-10}$ Pam^3/sec

Production Status
2 Weeks Lead-Time for Shipping

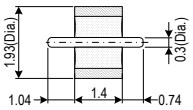
TYPE: KPC292F302

2.92 mm Female



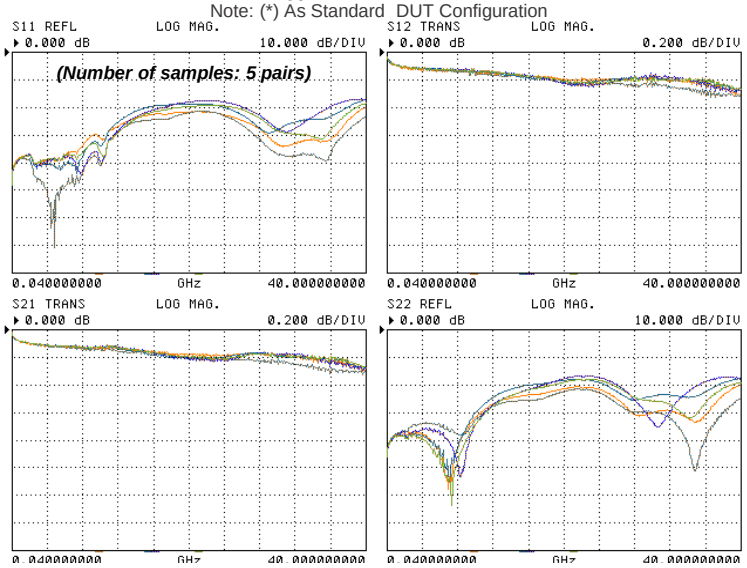
TYPE: GB292

Glass Bead

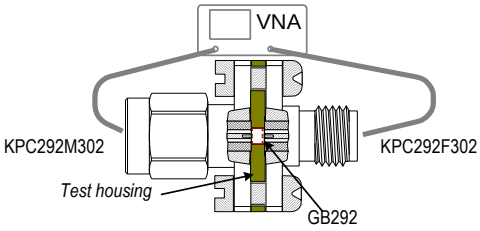


Typical Performance

Note: (*) As Standard DUT Configuration



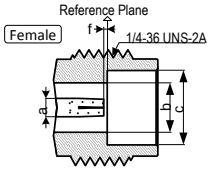
Test configuration



Standard DUT:
Cascaded KPC292M302 (Customized Product, On reguest), GB292 and KPC292F302

Interface Mating Dimensions of KPC292 (2.92 mm Connectors)

KPC292(2.92 mm)	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	------
e	------
f	0-0.050
g	------



NOTE:
All dimensions are in millimeters.
(**) Thermo-sonic wire bondable gold plating

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified **Kawashima Manufacturing Co., Ltd.**

1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

株式会社 川島製作所
214-0031 川崎市多摩区東生田1-3-5
Tel: 044-911-7073 Fax: 044-911-9621
http://www.kmco.co.jp/ E-mail: sales-j@kmco.co.jp

Semirigid Cable Assemblies, Within (Conform to IEEE-Std-287)

1 mm	Up to 110 GHz

1.85 mm	Up to 60/65 GHz
2.4 mm	Up to 50 GHz
2.92 mm	Up to 40 GHz

Semirigid Cable Assemblies, Between (Conform to IEEE-Std-287)

1 mm/1.85 mm	Up to 67 GHz

2.4 mm /1.85 mm	Up to 50 GHz
2.92 mm/1.85 mm	Up to 40 GHz
2.92 mm/2.4 mm	Up to 40 GHz

1.85 mm/SMPM (*)	Up to 65 GHz
2.4 mm /SMPM (*)	Up to 50 GHz
2.92 mm/SMPM (*)	Up to 40 GHz

SemiFlex Cable Assemblies (Conform to IEEE-Std-287)

1 mm/1 mm	Up to 110 GHz
1.85 mm/1.85 mm	Up to 65 GHz
1.85 mm/SMPM (*)	Up to 65 GHz
2.92 mm/2.92 mm	Up to 40 GHz
2.92 mm/SMPM (*)	Up to 40 GHz

(*) Compatible with "GPPO" and "Mini SMP"

Subject to Change Without Notice

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

Re-Formable Semirigid Cable Assemblies, In-Series

Connector Interface 1 mm for DC - 110 GHz

DESCRIPTION

"CA100FF, MF, and MM" re-formable semirigid cable assemblies are up to 110 GHz and **easy to install with bending by hand** at your lab/site.
They are designed for broadband measurement, instrument, and system applications.

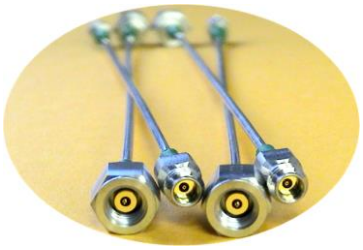
All materials are **"lead free"**.

SPECIFICATIONS

See below table.

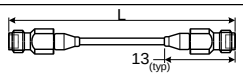
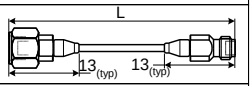
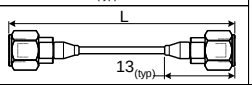
CABLE PROPERTIES

Outer Conductor	1.19 mm Diameter Copper with Cu/Sn/Zn Plated
Center Conductor	Silver Plated Copper
Insulator	PTFE
Moding Frequency	112 GHz (Approx.)
Delay Time	0.476 ns/100 mm
Inside Bending Radius	3 mm (min)
"Non-Magnetic"	



Production Status
2 Weeks Lead-Time for Shipping

[*] Please specify length (L: □□□□ see following table) when you order this item.
For example: CA100MM0035 (Length: 35 mm)

TYPE	Connector Interface	Frequency Range	Return Loss	Insertion Loss	Temperature Range	Length (L)
CA100FF □□□□ *Female/Female* 	1 mm	DC-110 GHz	> 17 dB	See Fig.1	-55 to +100 ˚C	30 to 300 mm +/-1 mm [*] (Over 301 mm: Negotiable)
CA100MF □□□□ *Male/Female* 						
CA100MM □□□□ *Male/Male* 						

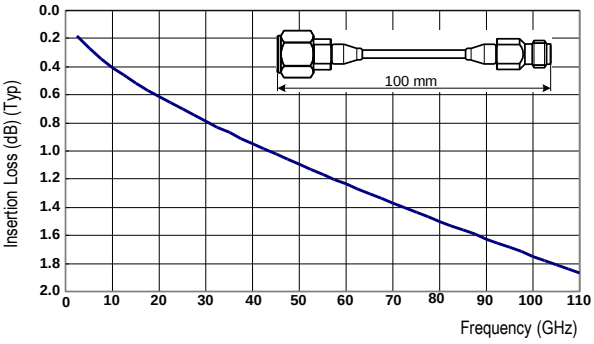


Fig.1 Frequency vs Insertion Loss, L=100 mm

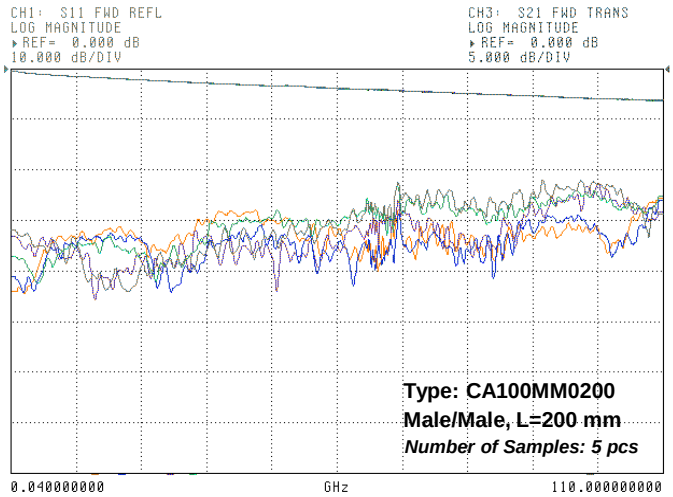
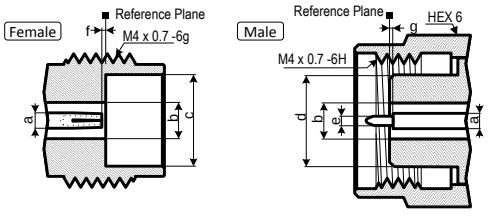


Fig. 2 Typical Performance

Interface Mating Dimensions of KPC100 (1 mm Connectors)



KPC100(1 mm)	
a	ϕ 0.434
b	ϕ 1.000
c	ϕ 2.390
d	ϕ 2.358
e	ϕ 0.250
f	0-0.013
g	0-0.013

NOTE:
All dimensions are in millimeters.

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice *Rev. 03 June 2017*

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

Re-Formable Semirigid Cable Assemblies, In-Series

Connector Interface 1.85 mm for DC - 60 GHz, 2.4 mm for DC - 50 GHz, 2.92 mm for DC - 40 GHz

DESCRIPTION

"CA185/240/292FF, MF, and MM" re-formable semirigid cable assemblies are up to 40, 50 and 60 GHz, and **easy to install with bending by hand** at your lab/site.
They are designed for broadband measurement, instrument, and system applications.

All materials are **"lead free"**.

SPECIFICATIONS

Electrical:
See below table.

CABLE PROPERTIES

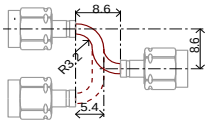
Outer Conductor	2.2 mm Diameter Copper with Cu/Sn/Zn Plated
Center Conductor	Silver Plated Copper
Insulator	Solid PTFE
Moding Frequency	61 GHz (Approx.)
Delay Time	1.43 ns/300 mm
Inside Bending Radius	3.2 mm (min)
"Non-Magnetic"	

Production Status
2 Weeks Lead-Time for Shipping

[*] Please specify length (L: □□□□ see following table) when you order this item.
For example: CA185MM0035 (Length: 35 mm)

TYPE	Connector Interface	Frequency Range	Return Loss	Insertion Loss	Temperature Range	Length (L)
CA185FF □□□□ *Female/Female*	1.85 mm	DC-60 GHz	> 18 dB	See Fig. 1	-55 to +100 ˚C	35 to 300 mm +/-2 mm [*] (5 mm step): Standard (Over 300 mm: Negotiable)
CA185MF □□□□ *Male/Female*						
CA185MM □□□□ *Male/Male*						
CA240FF □□□□ *Female/Female*	2.4 mm	DC-50 GHz	> 18 dB			
CA240MF □□□□ *Male/Female*						
CA240MM □□□□ *Male/Male*						
CA292FF □□□□ *Female/Female*	2.92 mm	DC-40 GHz	> 20 dB			
CA292MF □□□□ *Male/Female*						
CA292MM □□□□ *Male/Male*						

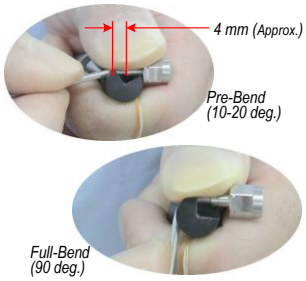
Reference for Minimum Cable Installation Space by Rounded Re-Forming



Hand Bender 2200
for Re-Forming (R3.2/7 mm)

CAUTION:
Bending of the Cable Using Hand Bender 2200

In order to prevent any damage in the joint part of the cable and the connector, please bend the cable about 4 mm away from the joint part.



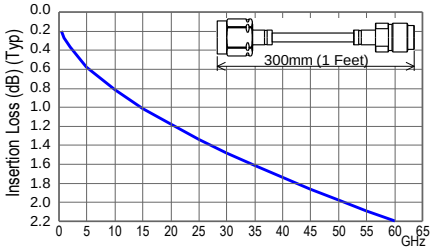


Fig.1 Frequency vs Insertion Loss, L=300 mm

---CAUTION---
When you install the cable assembly, please support the section of the cable close to the connector with your fingers before tightening the nut.
This cable is composed of a thin copper tube and could be easily damaged by applying a twist stress.

Fig.2 Tightening the Nut

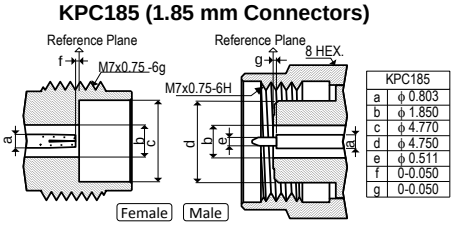
RoHS Compliant

REACH Compliant

NOTE: All dimensions are in millimeters.

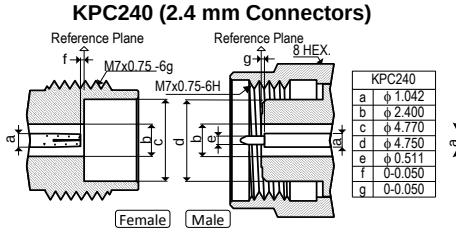
Connector Interface Mating Dimensions

KPC185 (1.85 mm Connectors)



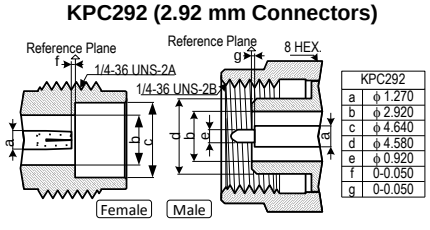
KPC185	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

KPC240 (2.4 mm Connectors)



KPC240	
a	ϕ 1.042
b	ϕ 2.400
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

KPC292 (2.92 mm Connectors)



KPC292	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 http://www.kmco.biz/
FAX: +81-44-911-9621 e-mail: sales@kmco.co.jp

Re-Formable Semirigid Cable Assemblies, Between

Connector Interface 1 mm and 1.85 mm for DC - 67 GHz

DESCRIPTION

"CA185F100F, CA185F100M, CA185M100F, and CA185M100M" re-formable semirigid cable assemblies, Between, are up to 67 GHz and **easy to install with bending by hand** at your lab/site. They are designed for broadband measurement, instrument, and system applications.

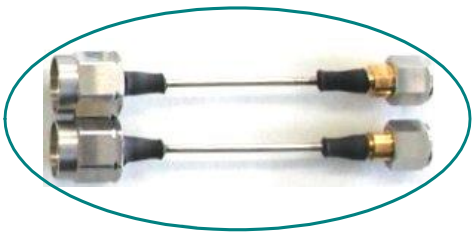
All materials are **"lead free"**.

SPECIFICATIONS

Electrical:
See below table.

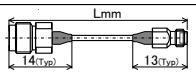
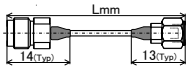
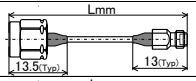
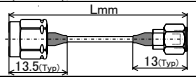
CABLE PROPERTIES

Outer Conductor	1.19 mm Diameter Copper with Cu/Sn/Zn Plated
Center Conductor	Silver Plated Copper
Insulator	PTFE
Moding Frequency	112 GHz (Approx.)
Delay Time	0.476 ns/100 mm
Inside Bending Radius	3 mm (min)
"Non-Magnetic"	



Production Status
2 Weeks Lead-Time for Shipping

[*] Please specify length (L:□□□□ see following table) when you order this item.
For example: CA185M100M0035 (Length: 35 mm)

TYPE	Connector Interface	Frequency Range	Return Loss	Insertion Loss	Temperature Range	Length (L)
CA185F100F □□□□ *Female/Female* 	1.85 mm /1 mm	DC-67 GHz	> 15 dB	See Fig. 1	-55 to +100 ˚C	35 to 300 mm +/-2 mm [*] (Over 300 mm: Negotiable)
CA185F100M □□□□ *Female/Male* 						
CA185M100F □□□□ *Male/Female* 						
CA185M100M□□□□ *Male/Male* 						

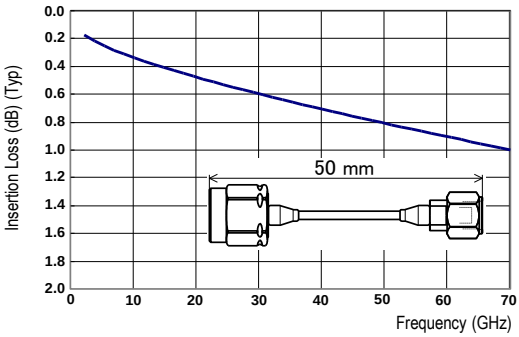


Fig.1 Estimated Insertion Loss, Including Adaptor

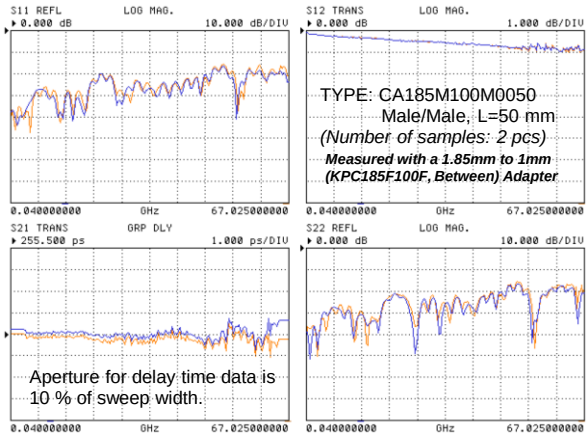


Fig.2 Typical Performance

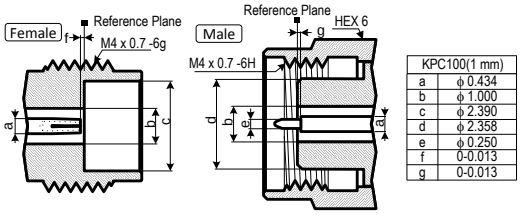
NOTE: All dimensions are in millimeters.

RoHS Compliant

REACH Compliant

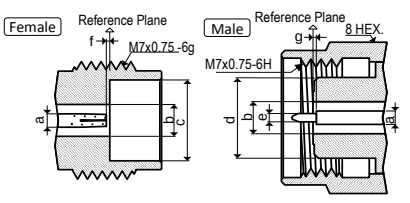
Connector Interface Mating Dimensions

KPC100 (1 mm Connectors)



KPC100(1 mm)	
a	ϕ 0.434
b	ϕ 1.000
c	ϕ 2.390
d	ϕ 2.358
e	ϕ 0.250
f	0-0.013
g	0-0.013

KPC185 (1.85 mm Connectors <*>)



KPC185(1.85 mm)	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

<*> Matable with 2.4 mm connectors

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO Kawashima Manufacturing Co., Ltd.
ISO9001:14001 Certified
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073
http://www.kmco.biz/
FAX: +81-44-911-9621
e-mail: sales@kmco.co.jp

Re-Formable Semirigid Cable Assemblies, Between

Connector Interface 2.4 mm/1.85 mm for DC - 50 GHz and 2.92 mm/1.85 mm, 2.92 mm/2.4 mm for DC - 40 GHz

DESCRIPTION

The Re-Formable Semirigid Cable Assemblies, Between, are up to 40 and 50 GHz, and **easy to install with bending by hand** at your lab/site. They are designed for broadband measurement, instrument, and system applications.

All materials are **"lead free"**.

SPECIFICATIONS

Electrical:
See below table.

CABLE PROPERTIES

Outer Conductor	2.2 mm Diameter Copper with Cu/Sn/Zn Plated
Center Conductor	Silver Plated Copper
Insulator	Solid PTFE
Moding Frequency	61 GHz (Approx.)
Delay Time	1.43 ns/300 mm
Inside Bending Radius	3.2 mm (min)
"Non-Magnetic"	

Production Status
2 Weeks Lead-Time for Shipping

[*] Please specify length (L:□□□□ see following table) when you order this item.
For example: CA240F185M0035 (Length: 35 mm)

TYPE	Connector Interface	Frequency Range	Return Loss	Insertion Loss	Temperature Range	Length (L)
CA240F185F □□□□ Female/Female	2.4 mm/ 1.85 mm	DC-50 GHz	> 18 dB	See Fig. 1	-55 to +100 ˚C	35 to 300 mm +/-2 mm [*] (5 mm step): Standard (Over 300 mm: Negotiable)
CA240F185M □□□□ Female/Male						
CA240M185F □□□□ Male/Female						
CA240M185M□□□□ Male/Male						
CA292F185F □□□□ Female/Female	2.92 mm/ 1.85 mm	DC-40 GHz				
CA292F185M □□□□ Female/Male						
CA292M185F □□□□ Male/Female						
CA292M185M□□□□ Male/Male						
CA292F240F □□□□ Female/Female	2.92 mm /2.4 mm					
CA292F240M □□□□ Female/Male						
CA292M240F □□□□ Male/Female						
CA292M240M□□□□ Male/Male						

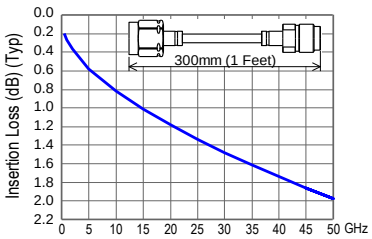
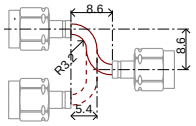


Fig.1 Frequency vs Insertion Loss, L=300mm

---CAUTION---
When you install the cable assembly, please support the section of the cable close to the connector with your fingers before tightening the nut. This cable is composed of a thin copper tube and could be easily damaged by applying a twist stress.

Fig.2 Tightening the Nut

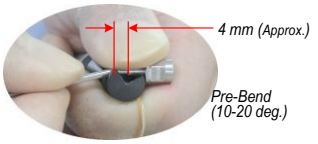
Reference for Minimum Cable Installation Space by Rounded Re-Forming



Hand Bender 2200
for Re-Forming (R3.2/7 mm)

CAUTION:
Bending of the Cable Using Hand Bender 2200

In order to prevent any damage in the joint part of the cable and the connector, please bend the cable about 4 mm away from the joint part.

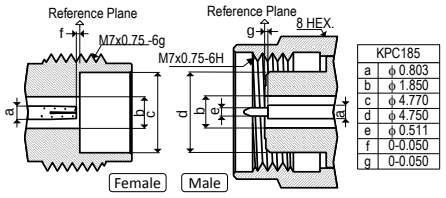


RoHS Compliant

REACH Compliant

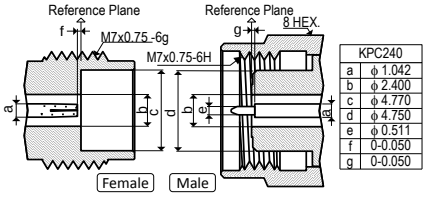
Connector Interface Mating

KPC185 (1.85 mm Connectors)



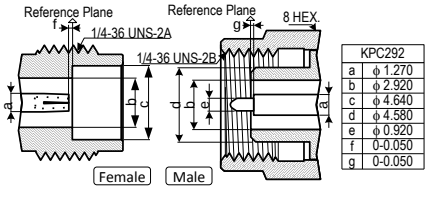
KPC185	
a	ϕ 0.803
b	ϕ 1.850
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

KPC240 (2.4 mm Connectors)



KPC240	
a	ϕ 1.042
b	ϕ 2.400
c	ϕ 4.770
d	ϕ 4.750
e	ϕ 0.511
f	0-0.050
g	0-0.050

KPC292 (2.92 mm Connectors)



KPC292	
a	ϕ 1.270
b	ϕ 2.920
c	ϕ 4.640
d	ϕ 4.580
e	ϕ 0.920
f	0-0.050
g	0-0.050

Specifications Subject to Change Without Notice

NOTE: All dimensions are in millimeters.

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO Kawashima Manufacturing Co., Ltd.
ISO9001:14001 Certified
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 FAX: +81-44-911-9621
http://www.kmco.biz/ e-mail: sales@kmco.co.jp

Re-Formable Semirigid Cable Assemblies, Between

Connectors: 1.85 mm, 2.4 mm, 2.92 mm, and SMPM

DESCRIPTION

The Re-Formable Semirigid Cable Assemblies, Between, are up to 65 GHz and **easy to install with bending by hand** at your lab/site.
They are designed for broadband measurement, instrument, and system applications.

All materials are **"lead free"**.

*SMPM: conforms to MIL-STD-348A 328.1

SPECIFICATIONS

Electrical:
See below table.

CABLE PROPERTIES

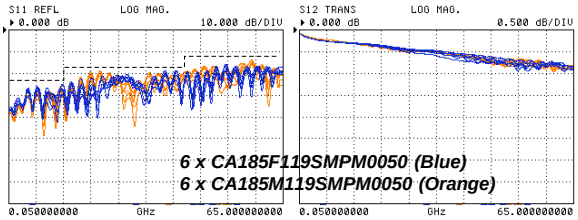
Outer Conductor	1.19 mm Diameter Copper with Cu/Sn/Zn Plated
Center Conductor	Silver Plated Copper
Insulator	PTFE
Moding Frequency	111 GHz (Approx.)
Delay Time	0.476 ns/100 mm
Inside Bending Radius	3 mm (min)
"Non-Magnetic"	

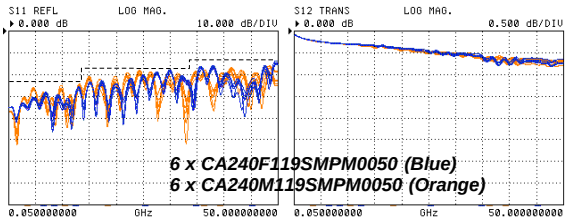
Production Status
2 Weeks Lead-Time for Shipping

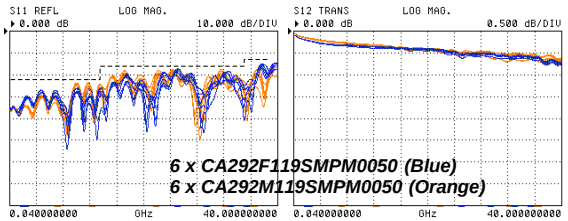
[*] Please specify length (L: □□□□ see following table) when you order this item.
For example: CA185F119SMPM0025 (Length: 25 mm)

TYPE	Connector Interface	Frequency Range	Return Loss	Insertion Loss	Temperature Range	Length (L)
CA185F119SMPM □□□□ *Female/SMPM Female*	1.85 mm /SMPM	DC-65 GHz	< 13 GHz: > 22 dB 13-48 GHz: > 16 dB 48-65 GHz: > 12 dB	See Fig. 1	-55 to +100 ˚C	25 to 300 mm +/-2 mm [*] (Over 300 mm: Negotiable)
CA185M119SMPM □□□□ *Male/SMPM Female*						
CA240F119SMPM □□□□ *Female/SMPM Female*	2.4 mm /SMPM	DC-50 GHz	< 13 GHz: > 22 dB 13-38 GHz: > 16 dB 38-50 GHz: > 13 dB			
CA240M119SMPM □□□□ *Male/SMPM Female*						
CA292F119SMPM □□□□ *Female/SMPM Female*	2.92 mm /SMPM	DC-40 GHz	< 13 GHz: > 22 dB 13-35 GHz: > 16 dB 35-40 GHz: > 13 dB			
CA292M119SMPM □□□□ *Male/SMPM Female*						

Typical Performance
including Coaxial Adapters for SMPM







RoHS Compliant **REACH Compliant**

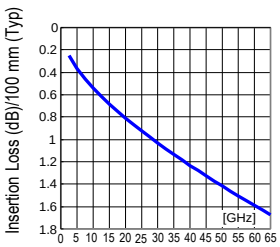
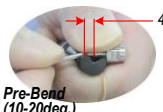


Fig.1 Frequency vs Insertion Loss

---CAUTION---
When you install the cable assembly, please support the section of the cable close to the connector with your fingers before tightening the nut.
This cable is composed of a thin copper tube and could be easily damaged by applying a twist stress.

Fig.2 Tightening the Nut

Hand Bender 1200
for Re-Forming (R3/6 mm)



CAUTION:
Bending of the cable using hand Bender 1200
In order to prevent any damage in the joint part of the cable and the connector, please bend the cable about 4 mm away from the joint part.

Removal Tool for SMPM

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073
http://www.kmco.biz/
FAX: +81-44-911-9621
e-mail: sales@kmco.co.jp

Semi-Flexible Cable Assemblies, In-Series

Connector Interface 1 mm for DC - 110 GHz

DESCRIPTION

"SFCA100FF, MF, and MM" semi-flexible cable assemblies are up to 110 GHz and **easy to install in a narrow space with hand form** at your lab/site.
They are designed for broadband measurement, instrument, and system use.

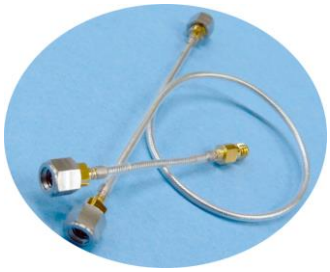
All materials are **"lead free"**.

SPECIFICATIONS

Electrical:
See below table.

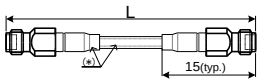
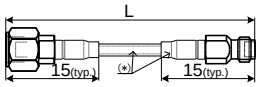
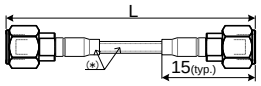
CABLE PROPERTIES

Outer Conductor	1.19 mm Diameter Tin-Soaked Copper Wire Braid
Center Conductor	Silver Plated Copper
Insulator	Solid PTFE
Moding Frequency	112 GHz (Approx.)
Delay Time	1.43 ns/300 mm
Inside Bending Radius	2 mm (min)
"Non-Magnetic"	



Production Status
TBD

[*] Please specify length (L: □□□□ see following table) when you order this item.
For example: SFCA100MM0050 (Length: 50 mm)

TYPE	Connector Interface	Frequency Range	Return Loss	Insertion Loss	Temperature Range	Length (L)
SFCA100FF □□□□ *Female/Female* 	1 mm	DC-110 GHz	> 15 dB	See Fig. 1	-30 to +100 ˚C	30 to 150 mm +/-1 mm [*] (Over 150 mm: Negotiable)
SFCA100MF □□□□ *Male/Female* 						
SFCA100MM□□□□ *Male/Male* 						

(*) Jacket (UL certified heat shrink tube) for cable braid protection

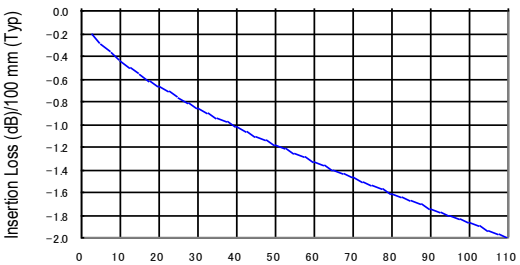


Fig.1 Frequency vs Insertion Loss, Length=100 mm

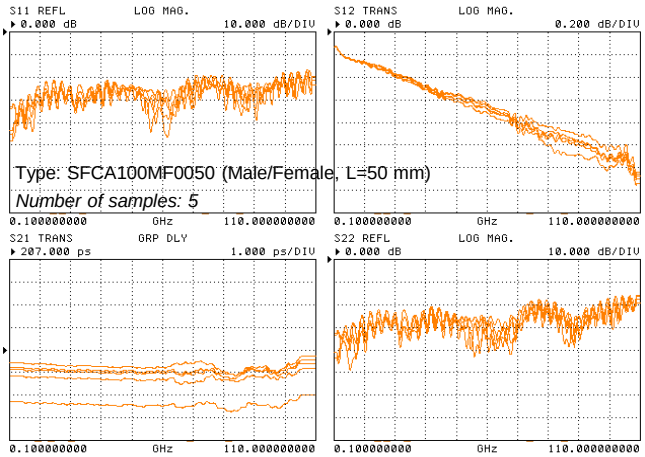
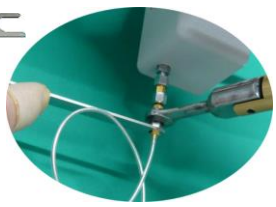


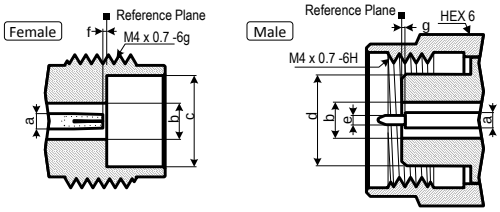
Fig.2 Typical Performance

Hold Wrench #3555



<Note for Installation>
When tightening the nut, it is recommended to use the hold wrench with a torque wrench to prevent any damage by twisting the cable.

Interface Mating Dimensions of KPC100 (1 mm Connectors)



KPC100(1 mm)	
a	ϕ 0.434
b	ϕ 1.000
c	ϕ 2.390
d	ϕ 2.358
e	ϕ 0.250
f	0-0.013
g	0-0.013

RoHS Compliant

REACH Compliant

NOTE: All dimensions are in millimeters.

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO ISO9001:14001 Certified
Kawashima Manufacturing Co., Ltd.
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073
http://www.kmco.biz/
FAX: +81-44-911-9621
e-mail: sales@kmco.co.jp

Preliminary

Semi-Flexible Cable Assemblies

1.85 mm/SMPM for DC - 65 GHz, 2.92 mm/SMPM for DC - 40 GHz

DESCRIPTION

The Semi-Flexible Cable Assemblies are up to 40 and 65 GHz, and **easy to install** at your lab/site.
They are designed for broadband measurement, instrument, and system use.

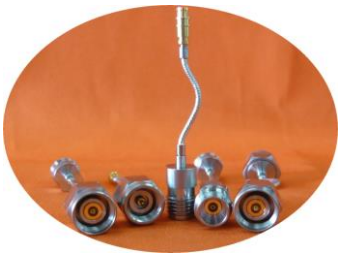
All materials are **"lead free"**.
*SMPM: conforms to MIL-STD-348A NOTICE 5 328.1. SMPM female interface

SPECIFICATIONS

Electrical:
See below table.

CABLE PROPERTIES

Outer Conductor	1.19 mm Diameter Tin-Soaked Copper Wire Braid
Center Conductor	Silver Plated Copper
Insulator	Solid PTFE
Moding Frequency	112 GHz (Approx.)
Delay Time	1.43 ns/300 mm
Inside Bending Radius	2 mm (min)
"Non-Magnetic"	



Production Status
2 Weeks Lead-Time for Shipping

[**] Please specify length (L: □□□□ see following table) when you order this item.
For example: SFCA185MM0035 (Length: 35 mm)
SFCA185MM0035J (Length: 35 mm, with Jacket)

TYPE	Connector Interface	Frequency Range	Return Loss	Insertion Loss	Temperature Range	Length (L)	With Jacket
SFCA185119FF □□□□ *Female/Female*	1.85 mm	DC-65 GHz (Within)	> 17 dB	See Fig. 1	-55 to +100 °C (-30 to +100 °C for Jacket Type)	35 to 150 mm +/-2 mm [**] Standard (Over 150 mm: Negotiable)	Available (UL Certified Heat Shrink Tube)
SFCA185119MF □□□□ *Male/Female*							
SFCA185119MM □□□□ *Male/Male*							
SFCA292119FF □□□□ *Female/Female*	2.92 mm	DC-40 GHz (Within)					
SFCA292119MF □□□□ *Male/Female*							
SFCA292119MM □□□□ *Male/Male*							
SFCA292F119185F □□□□ *Female/Female*	2.92 mm /1.85 mm	DC-40 GHz (Between)					
SFCA292M119185F □□□□ *Male/Female*							
SFCA292F119185M □□□□ *Female/Male*							
SFCA292M119185M □□□□ *Male/Male*							
SFCA185F119SMPM □□□□ *Female/Female*	1.85 mm /SMPM [1]	DC-65 GHz (Between)	< 13 GHz: > 22 dB 13-48 GHz: > 16 dB 48-65 GHz > 12 dB				
SFCA185M119SMPM □□□□ *Male/Female*							
SFCA292F119SMPM □□□□ *Female/Female*	2.92 mm /SMPM [1]	DC-40 GHz (Between)	> 16 dB				
SFCA292M119SMPM □□□□ *Male/Female*							

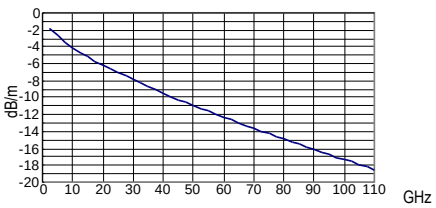
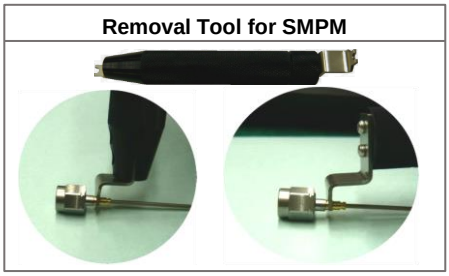
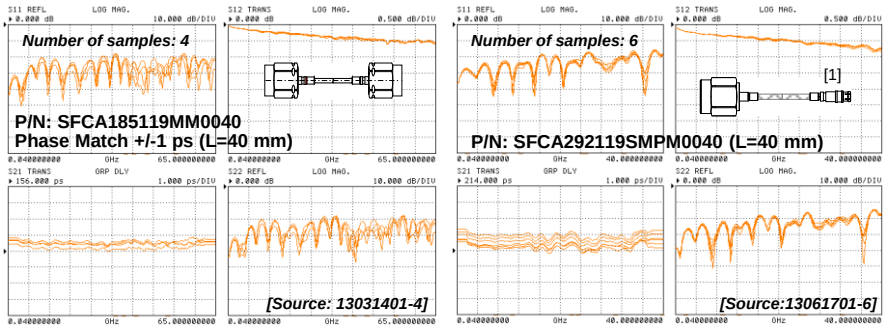


Fig.1 Frequency vs Insertion Loss, L=1000 mm

Removal Tool for SMPM



Typical Performance



Note [1] :
The measured values of insertion and return loss are included in the performance of the SMPM to 1.85 mm (or 2.92 mm) adaptor.

NOTE: All dimensions are in millimeters.

RoHS Compliant

REACH Compliant

Specifications Subject to Change Without Notice

Rev. 03 June 2017

Copyright(C) 2002-2017 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO **Kawashima Manufacturing Co., Ltd.**
ISO9001:14001 Certified
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN
TEL: +81-44-911-7073 FAX: +81-44-911-9621
http://www.kmco.biz/ e-mail: sales@kmco.co.jp