# **IEEE-std-287** Conformed

# **Precision Coaxial Connectors**

# **Coaxial Adapters, Within Series**

**Coaxial Adapters, Between Series** 

0.8mm/0.8mm Up to 145 GHz



1mm/1mm

Up to 70 GHz

1.85mm/1.85mm

2.4mm/2.4mm Up to 50 GHz

2.92mm/2.92mm Up to 40 GHz 3.5mm/3.5mm Up to 26.5 GHz



1mm/0.8mm

Up to 110 GHz



1.35mm/1mm

Up to 90 GHz



1.85mm/1mm

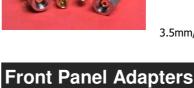
Up to 70 GHz

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

# Panel Adapters, Within



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





Semirigid Cable Assemblies

Up to 110GHz

Up to 60/65GHz

Up to 65GHz Up to 40GHz

1.85mm

2.92mm

2.4mm

2.92mm

Up to 50GHz

Up to 40GHz



1mm

1.85mm

Hermetic Adapters, Within

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











Manufactured by: Kawashima Manufacturing Co., Ltd. URL https://kmco.co.jp/en/

# 0.8 mm/0.8 mm DC - 145 GHz, Coaxial Adapters, In-Series

### DESCRIPTION

### "KPC080MF, FF, and MM"

are small size, low SWR, and low loss coaxial adapters. They are designed for ultrabroadband (up to sub-millimeter wave) measurement, instrument, and system applications.

TYPE: KPC080MF

(10.47)

**TYPE: KPC080FF** 0.8 mm Female/0.8 mm Female

7.9 eference Plane

10.54

KDACO

TYPE: KPC080MM

0.8 mm Male/0.8 mm Male

3.5(Across fia

(10.4)

Refe

KMCC

0.8 mm Male/0.8 mm Female 7.9

3.5(Across flats

3.5(Across flats

### SPECIFICATIONS

#### Electrical:

Frequency Range
SWR
Insertion Loss
Electrical Length
Temperature Range

#### **Mechanical:**

Body and Outer Conductor Inner Conductor **Coupling Torque** Connect/Disconnect Life

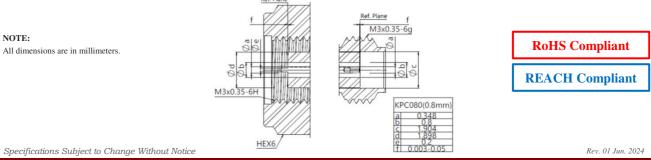
DC - 145 GHz < 1.6 1 dB (typ.) 8.4 mm (Nominal) -55 to +125 °C

Gold Plated Stainless Steel Gold Plated Beryllium Copper and Brass 45 N-cm (Nominal) > 500 Cycles (Estimate)



**Typical Performance** Number of samples: 4 pcs KPC080MF (Insertable Calibration) 1.8 1.7 1.6 1.5 VSWR 1.4 1.3 1.2 1.1 45 90 105 120 135 1503( Frequency[GHz] 0 -0.5 Insertion Loss[dB] -1 -1.5 -2 -2.5 L 15 30 45 60 90 105 120 135 150 75 Frequency[GHz]

#### Interface Mating Dimensions of KPC080 (0.8 mm Connectors)



Copyright(C) 2002-2024 Kawashima Manufacturing Co., Ltd. <All rights reserved

KMCO Kawashima Manufacturing Co., Ltd. ISO9001:14001 Certifie

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 FAX: +81-44-911-9621 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

e-mail: sales@kmco.co.jp

# 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 ultrabroadband (up to sub-millimeter wave) measurement, instrument, and system applications.

### SPECIFICATIONS

#### Electrical:

Frequency Range
SWR
Insertion Loss
Electrical Length
Temperature Range

#### Mechanical:

Body and Outer Conductor Inner Conductor **Coupling Torque** Connect/Disconnect Life

DC - 110 GHz < 1.3 (\*), <1.5 (\*\*) 0.5 dB (typ.) 11.6 mm (Nominal) -55 to +125 °C



Number of samples: 7 pcs

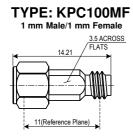
90 100 110

Gold Plated Stainless Steel Gold Plated Beryllium Copper and Brass 45 N-cm (Nominal) > 500 Cycles (Estimate)

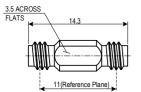
0.0 -0.1 -0.2 -0.3 -0.4 -0.5 -0.6 -0.7 -0.8 -0.9 -1.0

0 10 20 30 40 50 60 70 80

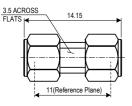
Insertion Loss (dB)



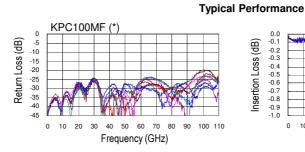
**TYPE: KPC100FF** 1 mm Female/1 mm Female

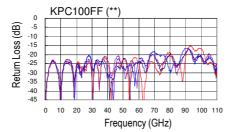


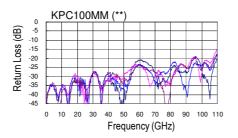
#### TYPE: KPC100MM 1 mm Male/1 mm Male

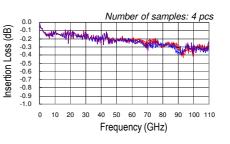


ISO9001:14001 Certifie

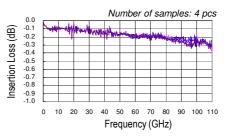




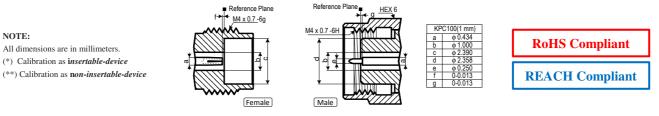




Frequency (GHz)



#### Interface Mating Dimensions of KPC100 (1 mm Connectors)



Specifications Subject to Change Without Notice Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>

KMCO Kawashima Manufacturing Co., Ltd.

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

TEL: +81-44-911-7073 https://kmco.co.jp/en/

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

Rev. 04 July 2020

# 1.85 mm/1.85 mm DC - 70 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 Insertion Loss measurement, instrument, and system applications.

# **SPECIFICATIONS**

Electrical: **Frequency Range** SWR **Electrical Length Temperature Range** 

#### Mechanical:

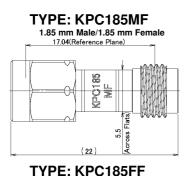
Body and Outer Conductor Inner Conductor **Coupling Torque** Connect/Disconnect Life

DC - 70 GHz < 1.3 < 0.45 dB 17.5 mm (Nominal) -55 to +125 °C

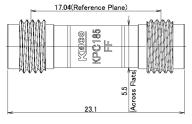


Passivated or Gold Plated Stainless Steel Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles

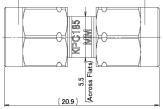
**Production Status** 2 Weeks Lead-Time for Shipping



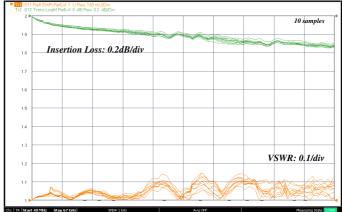
1.85 mm Female/1.85 mm Female



TYPE: KPC185MM 1.85 mm Male/1.85 mm Male 17.04(Reference Plane)

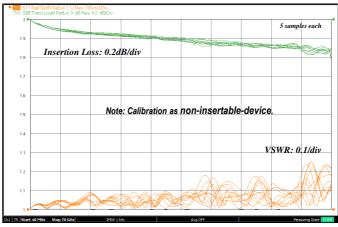


NOTE:



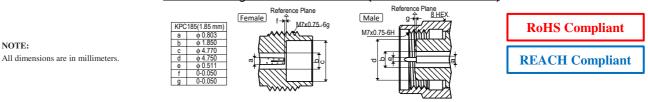
**Typical Performance** 

KPC185MF 0.04~70GHz



KPC185FF & KPC185MM 0.04~70GHz

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



<All rights reserved.

<\*> Matable with 2.4 mm connectors

Rev. 04 Feb. 2024

Specifications Subject to Change Without Notice Copyright(C) 2002-2024 Kawashima Manufacturing Co., Ltd

KMCO Kawashima Manufacturing Co., Ltd. SO9001:14001 Certified

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 Kawasaki 214-0031 JAPAN https://kmco.co.jp/en/

# 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 Insertion Loss measurement, instrument, and system applications.

### **SPECIFICATIONS**

**Electrical: Frequency Range** SWR **Electrical Length Temperature Range** 

#### Mechanical:

Body and Outer Conductor Inner Conductor **Coupling Torque** Connect/Disconnect Life

S11 FORWARD REFLECTION

0 04000

DC - 50 GHz < 1.25 < 0.3 dB 17.5 mm (Nominal) -55 to +125 °C

#### Passivated Stainless Steel Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles

**Typical Performance** 

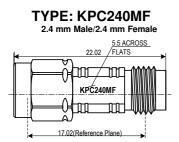
S21 FORWARD TRANSMISSION

LOG MAGNITU

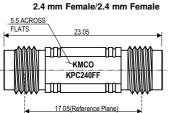


**Production Status** 2 Weeks Lead-Time for Shipping

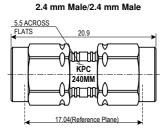
Data File: 02072925



# **TYPE: KPC240FF**



# TYPE: KPC240MM



NOTE:

S11 FORWARD REFLECTION ▶REF= 1.000 L 100.000 mU/DI Note: terminated with broadband load 0.04000 50.000000

SWR

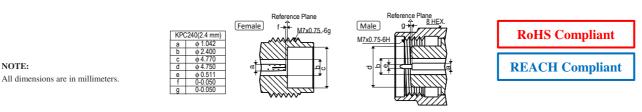
REF= 1.000 U

NITUDE						0.200	987D1
· ·····	 ~~W/WA	w~~~	ma	mmy	der Wa	Money	pulm
		r			- F 1		

▶REF= 1.000 U 100.000 mU/DIU Note: terminated with broadband load 50.000000

S21 FORWARD TRANSMISSION LOG MAGNITUDE Data File:02121401/ReCal ▶ REF= 0.000 0.040000 GH: 50.000000

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



<\*> Matable with 1.85 mm connectors

Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. <All rights reserved.

KMCO Manufacturing Co., Ltd.

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 Kawasaki 214-0031 JAPAN https://kmco.co.jp/en/

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

Rev. 03 June 2017

S11 FORWARD REFLECTION

50 000000

100.000 mU/DIU

Insertion Loss

▶REF=0.000 dE

# 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** 

SWR Insertion Loss Electrical Length

**Temperature Range** 

Mechanical:

Body and Outer Conductor Passivated Stainless Steel Inner Conductor **Coupling Torque** Connect/Disconnect Life

S11 FORWARD REFLECTION

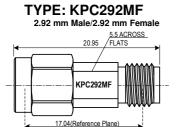
0.040000

DC - 40 GHz 1.15 (MF&MM) ້ < 1.20 (FF) < 0.2 dB 17.5 mm (Nominal) -55 to +125 °C

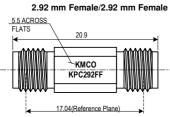
Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles



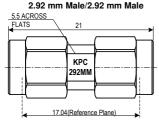
**Production Status** 2 Weeks Lead-Time for Shipping



# **TYPE: KPC292FF**



# TYPE: KPC292MM



S11 FORWARD REFLECTION Data File 02121604 ▶ REF= 1.000 U Note: SWR is combined with a through-line adapter for the calibration.

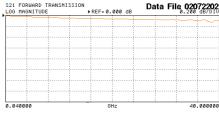
▶ REF= 1.	000 U	100.000	mU/DIU	LOG MAG
 		$\sim$		
 Gł	iz.	40.	000000	0.04000

Data File 02072202

SWR

#### **Typical Performance**

#### Insertion Loss



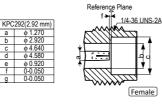
		RANSMIS			Data	File 02	12160
LUG MAG	SNITUDE		 REF=0.	000 dB			
			 		 an mary	maring	www.
••••••		·····	 2		 	· {· · · · · · · · · ·	÷
			 		 ¦		
						··?·····	
·····							j
			 		 ·····	· [· · · · · · · ·	÷
					1		
0.04000	10		Gł	Iz		40	.00000

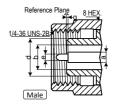
S11 FORWARD REFLEC SWR	TION • REF= 1.000 U	Data File 02121002
Note: SWR i	s combined with	
a through-lir	ne adapter for the ca	libration.
		~~~~
0.040000	GHz	40.00000

S21 FORWARD LOG MAGNITU	TRANSMISSION DE	▶ REF= 0.0	00 dB	Data F	ile 02 0.200	121002 dB/DI
				mannang	en mar	Mar Mark
0.040000		GHz	:		40.	00000

#### Interface Mating Dimensions of KPC292 (2.92 mm Connectors )









Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>

a b

Kawashima Manufacturing Co., Ltd.

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 Kawasaki 214-0031 JAPAN

Rev. 03 June 2017

https://kmco.co.jp/en/

# 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** SWR Insertion Loss **Electrical Length Temperature Range** 

#### Mechanical:

Body and Outer Conductor Inner Conductor **Coupling Torque** Connect/Disconnect Life

DC - 26.5 GHz (Moding: 34 GHz) < 1.15 < 0.2 dB 17.5 mm (Nominal) -55 to +125 °C

Passivated Stainless Steel Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles

**Typical Performance** 

FORWARD TRANSMISSION

AGNITUD

0.04000



**Production Status** 2 Weeks Lead-Time for Shipping

Data File: 03013005

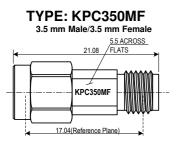
0.200 dB/DIU

27.00000

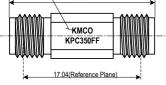
27.000000

Insertion Loss

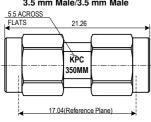
▶ REF= 0.000 dE



#### TYPE: KPC350FF 3.5 mm Female/3.5 mm Female 5.5 ACROSS FLATS 20.91



# **TYPE: KPC350MM**



SWR		 •	REF=1.	000 U	 1	80.000	mU/DI
0.04000	10	 	6	iz.		27.	. 80886

SWR

S11 FORWARD REFLECTION ▶ REF= 1.000 U 100.000 mU/ Note: terminated with broadband load 0.040000

▶REF= 1.000 U

Note: terminated with broadband load

S11 FORWARD REFLECTION

0.040000

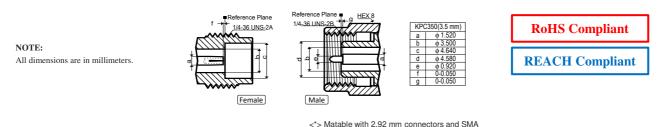
FORWARD TRANSMISSION MAGNITUDE ►REF=0.000 dB 0
and the second se

27.000000	0.040000	GHz
100.000 mU/DIV	S21 FORWARD TRANSMISS Log Magnitude	:ION ▶REF= 0.000 dB
100.000 00/010		FREF=0.000 UD

	▶REF=0.000 dB	0.200
		anning a part of the part of t
·····	······	

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

27.000000



Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.:

Kawashima Manufacturing Co., Ltd.

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 FAX: +81-44-911-9621 Kawasaki 214-0031 JAPAN https://kmco.co.jp/en/

Rev. 03 June 2017

e-mail: sales@kmco.co.jp

3.5 mm Male/3.5 mm Male

# 1 mm/0.8 mm DC - 110 GHz, Coaxial Adapters, Between-Series

### DESCRIPTION "KPC100F080F, KPC100F080M, KPC100M080F, and KPC100M080M"

coaxial adapters between 1.00 mm and 0.80 mm are small size, low SWR, and low loss.

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

# **SPECIFICATIONS**

**Electrical:** 

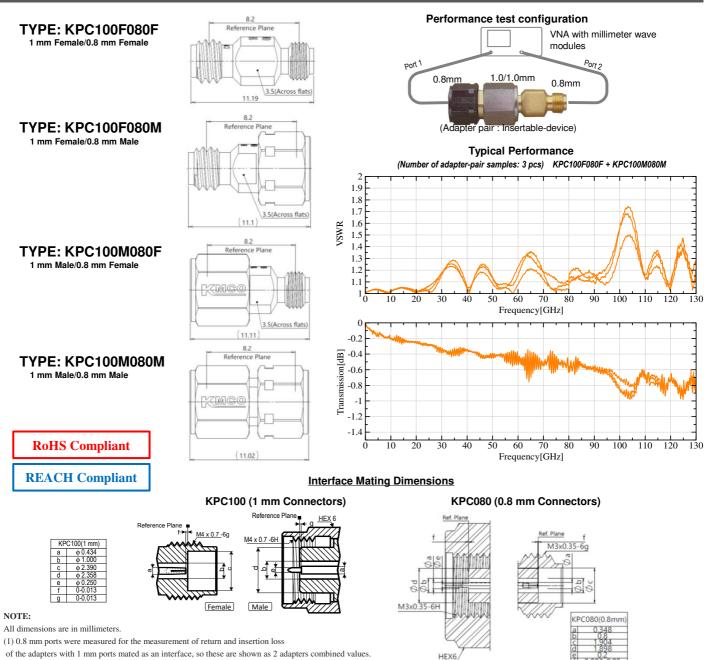
Frequency Range SWR Insertion Loss Electrical Length Temperature Range

#### Mechanical:

Inner Conductor **Coupling Torque** Connect/Disconnect Life DC - 110 GHz < 2.0 (1) 1.4 dB (typ.) (1) 8.7 mm (Nominal) -55 to +125 °C



Body and Outer Conductor Gold Plated Stainless Steel Gold Plated Beryllium Copper and Brass 45 N-cm (Nominal) > 500 Cycles (Estimate)



of the adapters with 1 mm ports mated as an interface, so these are shown as 2 adapters combined values.

Specifications Subject to Change Without Notice Copyright(C) 2002-2024 Kawashima Manufacturing Co., Ltd. < All rights reserved.>

KMCO Kawashima Manufacturing Co., Ltd. 9001:14001 Certified

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

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

Rev. 01 Jun. 2024

# 1.35 mm/1 mm DC - 90 GHz, Coaxial Adapters, Between-Series

### DESCRIPTION "KPC135F100F, KPC135F100M, KPC135M100F, and KPC135M100M"

coaxial adapters between 1.35 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** SWR Insertion Loss Electrical Length Temperature Range

#### Mechanical:

DC - 90 GHz < 1.4 (1) 1 dB (typ.) (1) 11.6 mm (Nominal) -55 to +125 °C



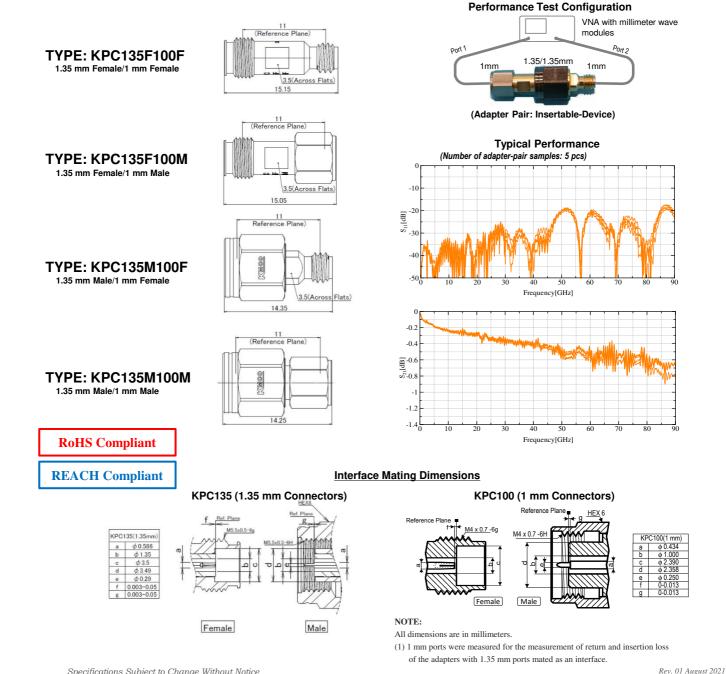
Body and Outer Conductor Gold Plated Stainless Steel Inner Conductor

**Coupling Torque** 

Gold Plated Beryllium Copper and Brass 90 N-cm for KPC135 (Nominal) 45 N-cm for KPC100 (Nominal)

> 500 Cycles (Estimate)

Connect/Disconnect Life



Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>

KMCO Manufacturing Co., Ltd.

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 FAX: +81-44-911-9621 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

e-mail: sales@kmco.co.jp

# 1.85 mm/1 mm DC - 70 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 SWR Insertion Loss Electrical Length **Temperature Range** 

#### Mechanical:

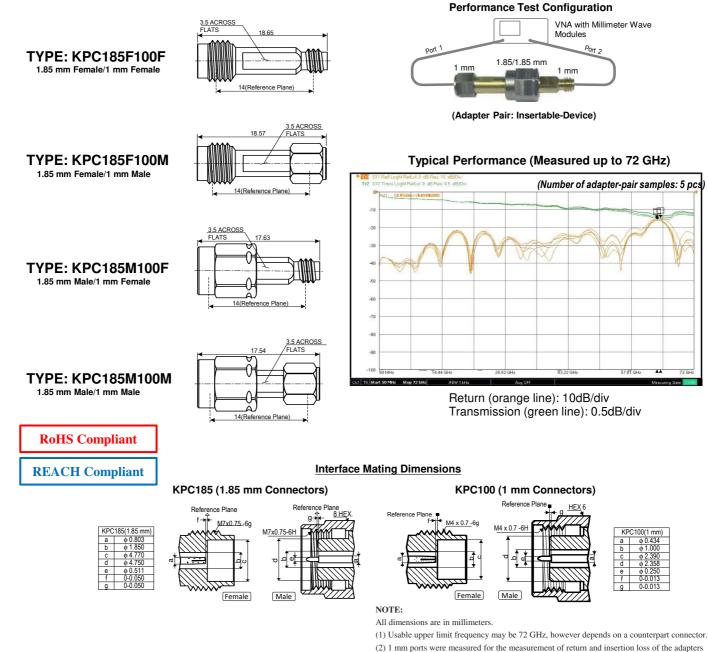
Inner Conductor

**Coupling Torque** 

DC - 70 GHz<sup>(1)</sup> < 1.4 0.8 dB (typ.) (2) 14.6 mm (Nominal) -55 to +125 °C



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



with 1.85 mm ports mated as an interface.

Rev. 05 Jun. 2024

Specifications Subject to Change Without Notice

```
Copyright(C) 2002-2024 Kawashima Manufacturing Co., Ltd. < All rights reserved.>
```



1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 FAX: +81-44-911-9621 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

e-mail: sales@kmco.co.ip

# 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 SWR Insertion Loss **Electrical Length Temperature Range** 

#### Mechanical:

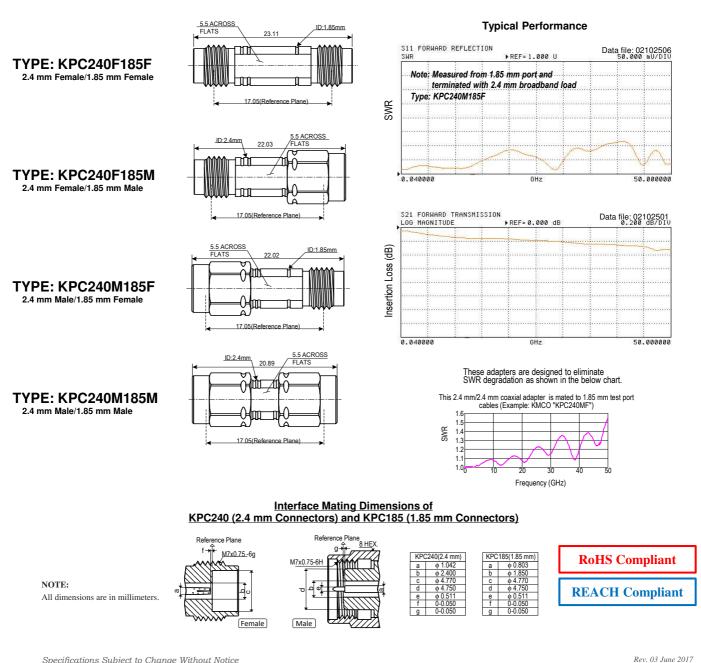
Inner Conductor

**Coupling Torque** Connect/Disconnect Life DC - 50 GHz < 1.25 (\*) < 0.4 dB (\*\*) 17.5 mm (Nominal) -55 to +125 °C

Body and Outer Conductor Passivated Stainless Steel Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles



**Production Status** 2 Weeks Lead-Time for Shipping



Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights re



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

TEL: +81-44-911-7073 https://kmco.co.jp/en/

# 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**

**Flectrical:** 

Frequency Range SWR Insertion Loss **Electrical Length Temperature Range** 

#### Mechanical:

Inner Conductor

**Coupling Torque** Connect/Disconnect Life DC - 40 GHz < 1.3 < 0.35 dB 17.5 mm (Nominal) -55 to +125 °C

Body and Outer Conductor Passivated Stainless Steel Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles



**Production Status** 

2 Weeks Lead-Time

for Shipping

5.5 ACROS FLATS 22.03 **Typical Performance** 2.92 mm Female/1.85 mm Female S11 FORWARD REFLECTION Data file:02100703 17.04(Reference Plane REF= 1.000 U Note: Terminated with 1.85 mm broadband load 5.5 ACROSS FLATS Type: KPC292M185M 20.90 SWR 17.04(Reference Plane) 0.04000 GHz 40.000000 5.5 ACROSS 22.34 FLAT: ٦I S21 FORWARD TRANSMISSION Data file:02100905 REF= 0.000 d LOG MAGNITUDE (dB) 17.03(Reference Plane) Insertion Loss ACROSS 20.94 Note: Includes 1.85 to 2.92 mm adapter loss for output port connection М Type: KPC292F185M **TYPE: KPC292M185M** 0.040000 40.000000 GHz 17.04(Reference Plane) **Interface Mating Dimensions** KPC292 (2.92 mm Connectors) KPC185 (1.85 mm Connectors <\*>) rence Plane Reference Plane Reference Plane Reference Refe 8 HE <u>M7x0.75</u>-6g f⇒ 1/4-36 UNS-2A KPC185(1.85 mm) KPC292(2.92 mm)

**TYPE: KPC292F185M** 2.92 mm Female/1.85 mm Male

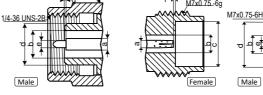
**TYPE: KPC292F185F** 

**TYPE: KPC292M185F** 2.92 mm Male/1.85 mm Female

2.92 mm Male/1.85 mm Male

**RoHS Compliant** 

**REACH Compliant** 





NOTE: All dimensions are in millimeters

Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>

KMCO

ISO3001:14001 Certified Kawashima Manufacturing Co., Ltd.

Female

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

TEL: +81-44-911-7073 FAX: +81-44-911-9621 https://kmco.co.jp/en/ e-mail: sales@kmco.co.jp

<\*> Matable with 2.4 mm connectors

a φ 0.803 b φ 1.850 c φ 4.770 d φ 4.750

Rev. 03 June 2017

e f φ0. 0-0.

# 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 SWR Insertion Loss Electrical Length **Temperature Range** 

#### Mechanical:

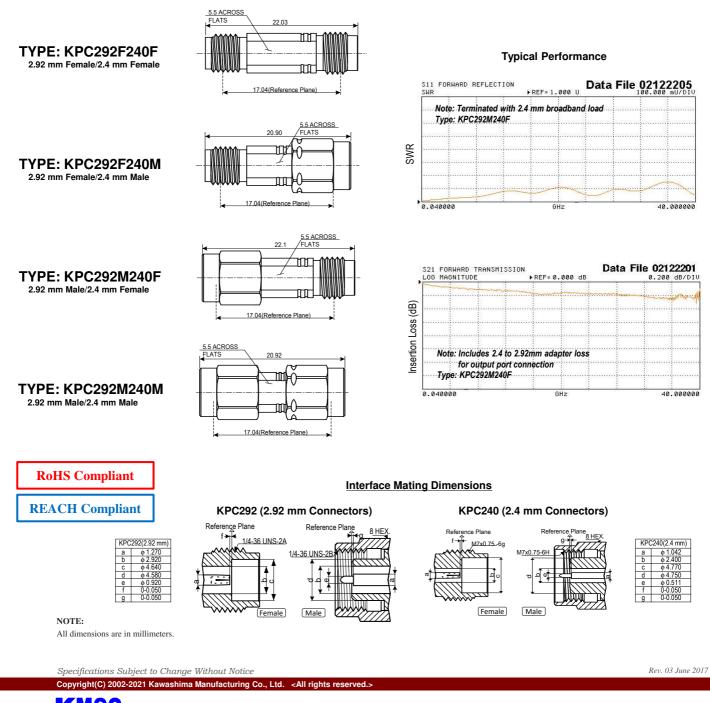
Inner Conductor

Coupling Torque Connect/Disconnect Life DC - 40 GHz < 1.22 < 0.25 dB 17.5 mm (Nominal) -55 to +125 °C

Body and Outer Conductor Passivated Stainless Steel Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles



**Production Status** 2 Weeks Lead-Time for Shipping



MCO Kawashima Manufacturing Co., Ltd. ISO9001-14001 Certified

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

TEL: +81-44-911-7073 https://kmco.co.jp/en/

# 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** SWR Insertion Loss Electrical Length **Temperature Range** 

#### **Mechanical:**

Inner Conductor Coupling Torque

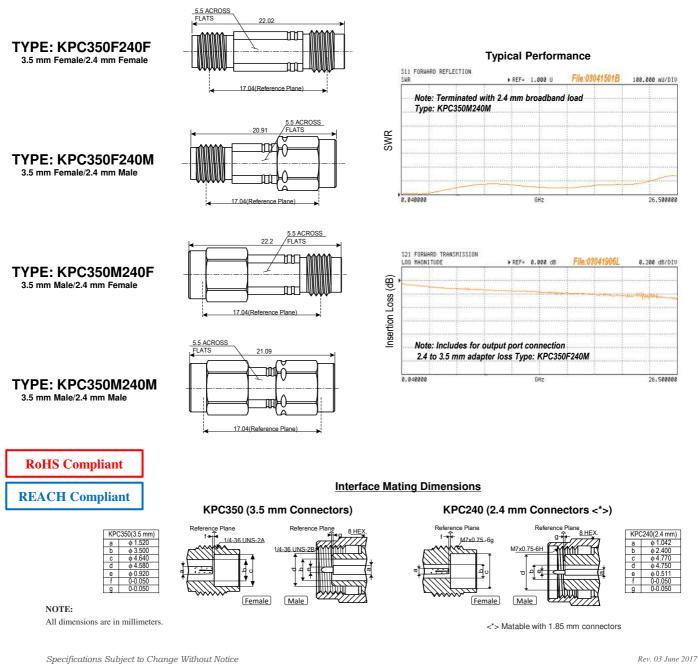
Connect/Disconnect Life

DC - 26.5 GHz (Moding: 34GHz) < 1.2 < 0.3 dB 17.5 mm (Nominal) -55 to +125 °C

Body and Outer Conductor Passivated Stainless Steel Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles



**Production Status** 2 Weeks Lead-Time for Shipping



Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 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 FAX: +81-44-911-9621 https://kmco.co.jp/en/ 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 SWR Insertion Loss **Electrical Length Temperature Range** 

### Mechanical:

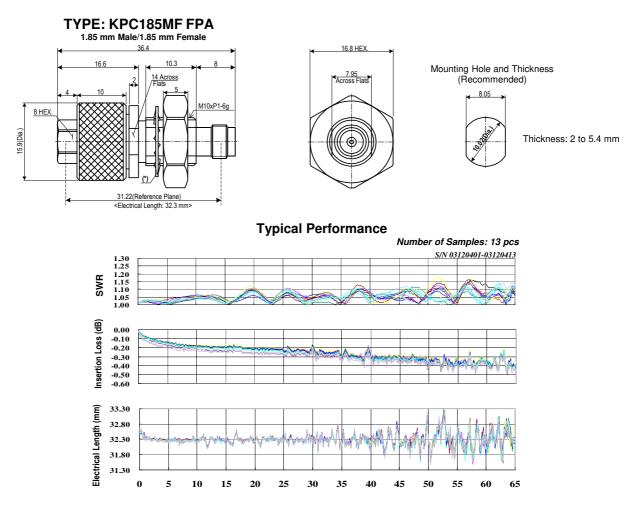
Body Outer Conductor Inner Conductor **Coupling Torque** Connect/Disconnect Life

DC - 65 GHz < 1.3 < 0.5 dB Shown below (Nominal) -55 to +125 °C

Passivated Stainless Steel (\*) Gold Plated Stainless Steel Gold Plated Beryllium Copper 90 N-cm (Nominal) > 1,000 Cycles



**Production Status** 3 Weeks Lead-Time for Shipping



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

NOTE:	KPC185(1.85 mm)           a         φ 0.803           b         φ 1.850           c         φ 4.770           d         φ 4.750	Reference Plane f f MZx0.756g	Reference Plane Male 9 + 8HEX. M7x0.75-6H	<b>RoHS Compliant</b>
All dimensions are in millimeters. (*)Toothed lockwasher is nickel-plated steel.	e			<b>REACH Compliant</b>

<\*> Matable with 2.4 mm connectors

Specifications Subject to Change Without Notice

ght(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.

KMCO Kawashima Manufacturing Co., Ltd. ISO9001-14001 Certified

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 FAX: +81-44-911-9621 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

e-mail: sales@kmco.co.jp

Rev. 03 June 2017

# 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** SWR Insertion Loss **Electrical Length Temperature Range** 

#### Mechanical:

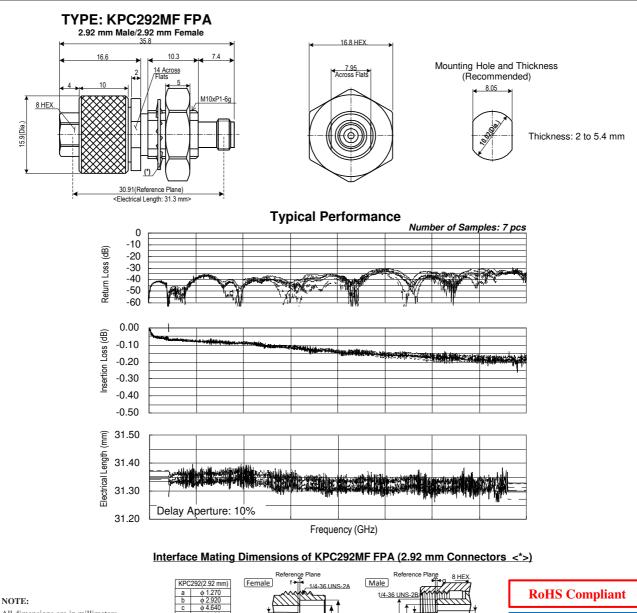
Body Outer Conductor Inner Conductor **Coupling Torque** Connect/Disconnect Life

DC - 40 GHz < 1.15 < 0.3 dB Shown below (Nominal) -55 to +125 °C

Passivated Stainless Steel (\*) Gold Plated Stainless Steel Gold Plated Beryllium Copper 90 N-cm (Nominal) > 1,000 Cycles



**Production Status** 3 Weeks Lead-Time for Shipping



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

<\*> Matable with 3.5 mm connectors and SMA

Rev. 03 June 2017

Specifications Subject to Change Without Notice Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. <All rights reserved.:

ЛСО Kawashima Manufacturing Co., Ltd.

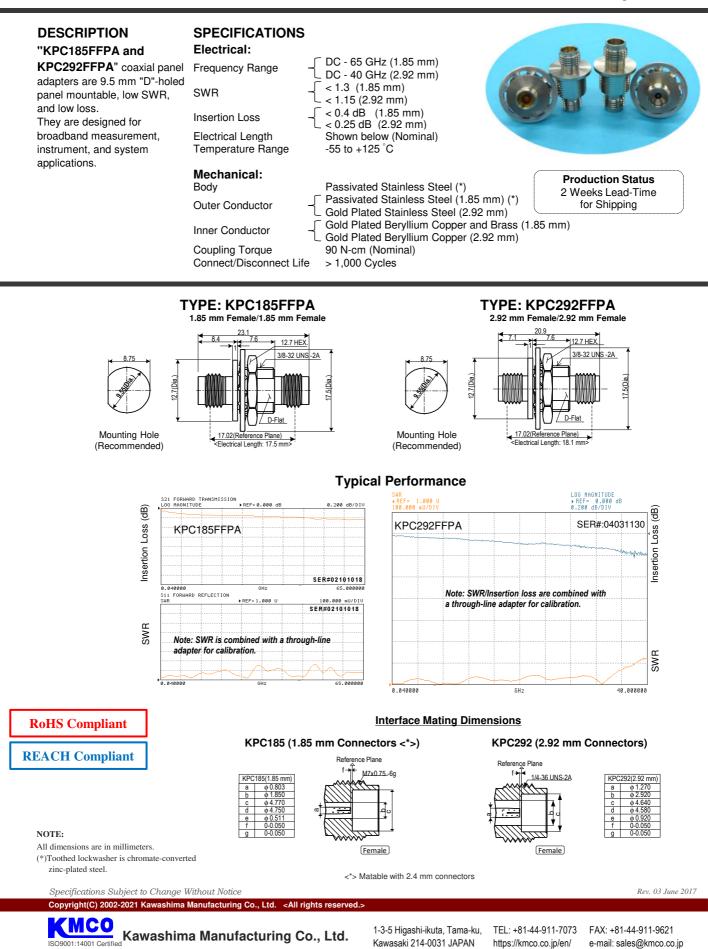
1-3-5 Higashi-ikuta, Tama-ku, Kawasaki 214-0031 JAPAN

TEL: +81-44-911-7073 FAX: +81-44-911-9621 https://kmco.co.jp/en/

e-mail: sales@kmco.co.jp

**REACH Compliant** 

# Panel Adapter, In Series 1.85 mm for DC - 65 GHz, 2.92 mm for 40 GHz Coaxial Panel Adapters



# 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-348B 328.2.

# **SPECIFICATIONS**

#### Electrical:

**Frequency Range** SWR Insertion Loss Temperature Range

#### Mechanical:

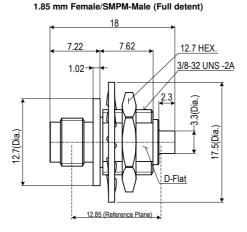
Inner Conductor **Coupling Torque** 

DC - 65 GHz (1.85 mm) L DC - 40 GHz (2.92 mm) < 1.5 < 0.7 dB -55 to +125 °C

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

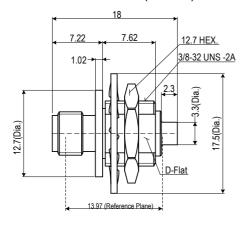


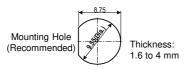
**Production Status** 2 Weeks Lead-Time for Shipping



TYPE: KPC185F-SMPM-FD-PA

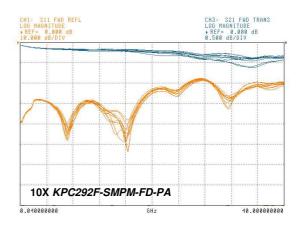
#### TYPE: KPC292F-SMPM-FD-PA 2.92 mm Female/SMPM-Male (Full detent)





including coaxial adapters for SMPM CH3: S21 FHD TRANS Log Magnitude \*REF= 0.000 dB 0.500 dB/DIV dB 10X KPC185F-SMPM-FD-PA 0.040000000 65.000000000

**Typical Performance** 



#### NOTE:

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



Specifications Subject to Change Without Notice

Copyright(C) 2002-2024 Kawashima Manufacturing Co., Ltd. < All rights reserved. MCO Kawashima Manufacturing Co., Ltd.

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 FAX: +81-44-911-9621 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

e-mail: sales@kmco.co.jp

Rev. 05 Jun. 2024

# 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.

#### **Connector Interface Standard:**

- MII -C-39012
- MIL-STD-348B
- IEC Std-169-15

### **SPECIFICATIONS**

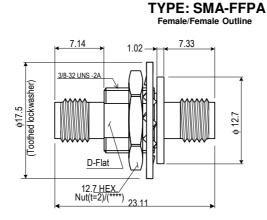
**Electrical:** Frequency Range SWR Insertion Loss Input Power Temperature Range

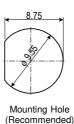
#### Mechanical:

**Outer Conductor** Inner Conductor Coupling Torque Connect/Disconnect Life DC - 20 GHz (\*) < 1.2 < 0.1 dB 10 W (max) -55 to +85 °C



Passivated Stainless Steel (\*\*) Gold Plated Beryllium Copper 56 N-cm (Nominal) > 5,000 Cycles (\*\*\*)





# **RF** Performance

S12 TRANS ▶ 0.000 di

0.04000000

S22 REFL ▶0.000 dB

0.04000000

LOG MAG.

GH:

LOG MAG.

20.00000000

20.00000000

("Non-Insertable Device" Calibration)

10.000 dB/DIV

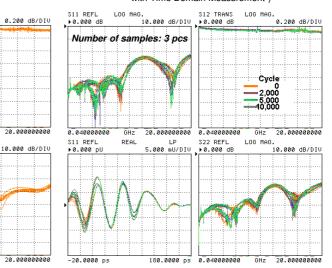
20.000000000

0.200 dB/DIV

20.000000000

**Connect/Disconnect Life** 

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



### 0.04000000 NOTE:

S11 REFL ▶ 0.000 dE

0.04000000

S21 TRANS ▶ 0.000 dE

LOG MAG.

GH:

LOG MAG.

Number of samples: 10 pcs

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

Specifications Subject to Change Without Notice

Copyright(C) 2002-2024 Kawashima Manufacturing Co., Ltd. < All rights reserved.> <u>(MCO</u> Kawashima Manufacturing Co., Ltd. ISO9001-14001 Certified

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

**RoHS Compliant** 

**REACH Compliant** 

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

Rev. 04 Jun. 2024

# 90 degree Angled-Swept Adaptor, Male to Female **SMA Coaxial Adapters**

### DESCRIPTION

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

#### **Connector Interface Standard:**

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

### **SPECIFICATIONS**

#### **Electrical:**

**Frequency Range** SWR

Insertion Loss Input Power **Temperature Range** 

#### Mechanical:

**Outer Conductor** Inner Conductor **Coupling Torque** Connect/Disconnect Life

< 0.15 dB (to 20 GHz) < 0.23 dB (to 24.6 GHz) 10 W (max) -55 to +85 °C Nickel Plated Stainless Steel

Gold Plated Beryllium Copper

DC - 24.6 GHz (\*)

< 1.25 (to 20 GHz)

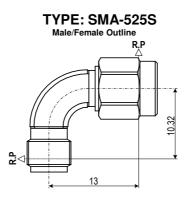
< 1.5 (to 24.6 GHz)

56 N-cm (Nominal)

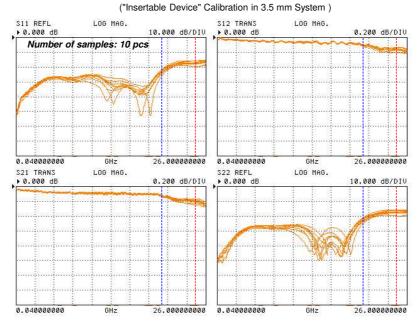
> 500 Cycles (\*\*)



**Production Status** 2 Weeks Lead-Time for Shipping



#### **RF** Performance



#### 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)

Specifications Subject to Change Without Notice

Copyright(C) 2002-2024 Kawashima Manufacturing Co., Ltd. < All rights reserved.> (MCO Kawashima Manufacturing Co., Ltd. ISO9001-14001 Certified

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 FAX: +81-44-911-9621 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

e-mail: sales@kmco.co.jp

**RoHS Compliant REACH Compliant** 

Rev. 04 Jun. 2024



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



1.85 mm

Up to 65 GHz



2.92 mm

Up to 40 GHz

Subject to Change Without Notice

# 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

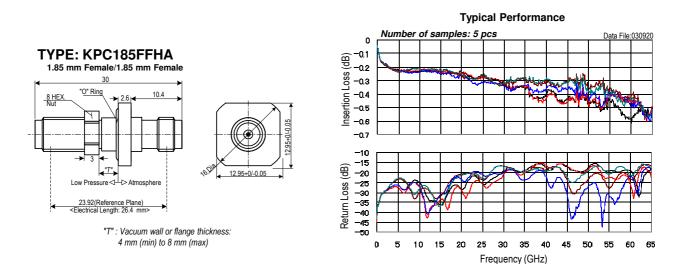
Electrical: Frequency Range SWR Insertion Loss Electrical Length Temperature Range Mechanical:

Body and Outer Conductor Inner Conductor Inner and Outer Conductor for Seal Insulator for Seal Gasket for Flange Seal Coupling Torque Connect/Disconnect Life He Leak Rate (\*) DC - 65 GHz < 1.5 < 0.7 dB Shown below (Nominal) -55 to +125 °C

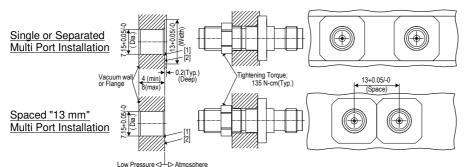
Gold Plated Stainless Steel Gold Plated Beryllium Copper Gold Plated Fe/Ni/Co Alloy (KOVAR) #7070 Glass (Corning) Fluoroelastomer "O" Ring 90 N-cm (Nominal) > 1,000 Cycles < 1x10<sup>-10</sup> Pam<sup>3</sup>/sec (< 1x10<sup>-9</sup> atm cc /sec)

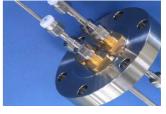


Production Status 4 Weeks Lead-Time for Shipping



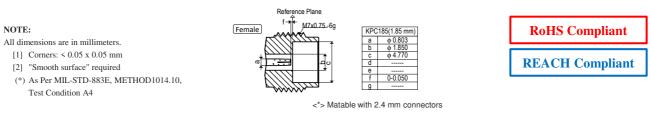
**Recommended Mounting Hole and Installation** 





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

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



Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>



Kawashima Manufacturing Co., Ltd.

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

I, TEL: +81-44-911-7073 https://kmco.co.jp/en/ Rev. 03 June 2017

# 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** SWR Insertion Loss Electrical Length **Temperature Range** Mechanical:

Body and Outer Conductor Inner Conductor Inner and Outer Conductor for Seal Insulator for Seal Gasket for Flange Seal **Coupling Torque** Connect/Disconnect Life He Leak Rate (\*)

DC - 40 GHz < 1.5 < 0.45 dB Below (Nominal) -55 to +125 °C

Gold Plated Stainless Steel and Brass Gold Plated Beryllium Copper Gold Plated Fe/Ni/Co Alloy (KOVAR) #7070 Glass (Corning) Fluoroelastomer "O" Ring 90 N-cm (Nominal) > 1,000 Cycles

< 1x10<sup>-10</sup> Pam<sup>3</sup>/sec (< 1x10<sup>-9</sup> atm cc /sec)

**Typical Performance** 



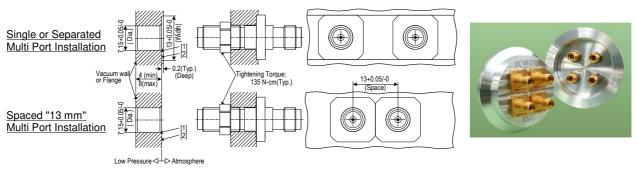
**Production Status** 

4 Weeks Lead-Time

for Shipping

#### Data File:060330N5 S11 REFL LOG MAG. S12 TRANS LOG MAG 10.000 dB/DIV 0.200 dB/DIV 0.000 dE 0.000 d Number of samples: 5 pcs **TYPE: KPC292FFHA** 2.92 mm Female/2.92 mm Female 30 "O" Ring 8 HEX. 10.4 42.6 12.95+0/-0.0 æ 40.0000000000 0.040000000 GHz 40.000000000 0.04000000 GHz S21 TRANS LOG MAG LOG MAG. S22 REFL 0.200 dB/DIV 0.000 dE 10.000 dB/DIU 0.000 dE <u>"7</u>" NR DE 12.95+0/-0.0 sure⊲↓⊳∆tm the set Low Pre 26.14(Reference Plane) <Electrical Length: 2x.xmm> "T" : Vacuum wall or flange thickness: 4 mm (min) to 8 mm (max)

**Recommended Mounting Hole and Installation** 



0.040000000

GHz

40,000000000

0.04000000

GHz

40.000000000

#### Interface Mating Dimensions of KPC292 (2.92 mm Connectors <\*>) Reference Plane NOTE: **RoHS Compliant** 1/4-36 UNS-2A Female KPC292(2.92 All dimensions are in millimeters φ1 [1] Chamfer: < 0.05 mm φ 2.920 φ 4.640 **REACH Compliant** [2] "Smooth surface" required (\*) As Per MIL-STD-883E, METHOD1014.10, e 0-0.050 Test Condition A4 <\*> Matable with 3.5 mm and SMA Rev. 03 June 2017

Specifications Subject to Change Without Notice Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>

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

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 FAX: +81-44-911-9621 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

e-mail: sales@kmco.co.jp



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







1	mm	

Up to 110 GHz

Up to 65 GHz

1.85 mm

2.92 mm

Up to 40 GHz

Subject to Change Without Notice

# 1 mm DC - 110 GHz, Flange Launchers

### DESCRIPTION

#### "KPC100F311 and KPC100M311"

flange launchers are designed for ultrabroadband devices and units with coaxial I/O interfaces.

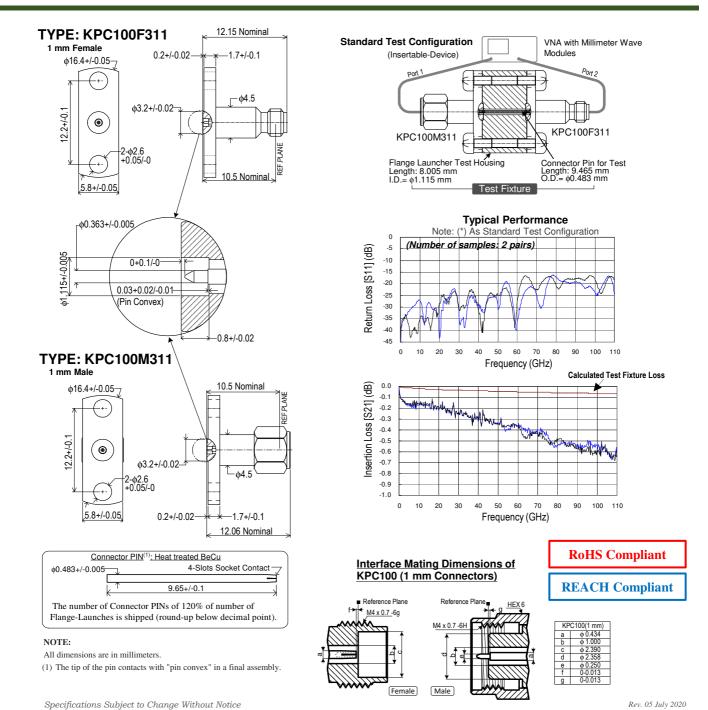
### **SPECIFICATIONS**

#### Mechanical:

Inner Conductor Coupling Torque Connect/Disconnect Life DC - 110 GHz < 1.5 (\*) 1 dB (typ.) (\*) 11.1 mm (Nominal) -55 to +125 °C



Body and Outer Conductor Gold Plated Stainless Steel Gold Plated Beryllium Copper and Brass 45 N-cm (Nominal) > 500 Cycles (Estimate)



Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>

KMCO Kawashima Manufacturing Co., Ltd. SO9001:14001 Certified

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

TEL: +81-44-911-7073 https://kmco.co.jp/en/

# 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:

Mechanical:

Inner Conductor

**Coupling Torque** 

Connect/Disconnect Life

**Frequency Range** SWR Temperature Range

DC - 65 GHz < 1.5 (\*) -55 to +125 °C

Gold Plated Beryllium

Copper and Brass

90 N-cm (Nominal)

> 1,000 Cycles

Body and Outer Conductor Passivated Stainless Steel

# **Glass Bead**

**Electrical: Frequency Range Temperature Range** 

## Mechanical:

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

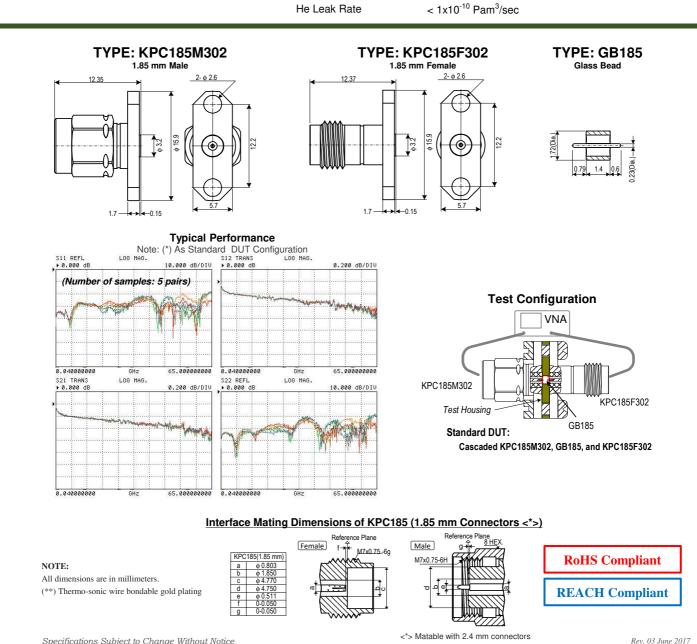
DC - 65 GHz

-55 to +125 °C

Others: Soldering Temperature 330°C (max)



**Production Status** 2 Weeks Lead-Time for Shipping



Specifications Subject to Change Without Notice



1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 Kawasaki 214-0031 JAPAN

https://kmco.co.jp/en/

# 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:

Mechanical:

**Frequency Range** SWR **Temperature Range** 

DC - 40 GHz < 1.5 (\*) -55 to +125 °C

#### Glass Bead Electrical:

**Frequency Range Temperature Range** 

#### Mechanical:

Body and Inner Conductor Gold Plated (\*\*) Fe/Ni/Co

Insulator

330°C (max) < 1x10<sup>-10</sup> Pam<sup>3</sup>/sec

DC - 40 GHz

-55 to +125 °C

Alloy (KOVAR)

#7070 Glass (Corning)

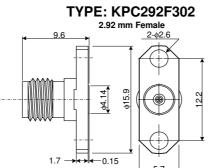


**Production Status** 2 Weeks Lead-Time for Shipping

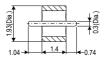
Inner Conductor **Coupling Torque** Connect/Disconnect Life

Body and Outer Conductor Passivated Stainless Steel Gold Plated Beryllium Copper and Brass 90 N-cm (Nominal) > 1,000 Cycles

#### Others: Soldering Temperature He Leak Rate

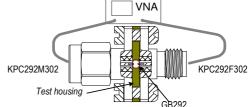


TYPE: GB292 Glass Bead



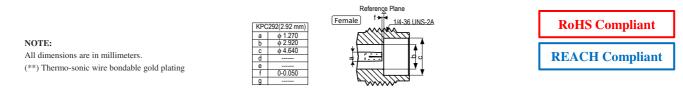
#### **Typical Performance** Note: (\*) As Standard DUT Configuration S11 REFL 10.000 dB/DIV 0.200 dB/DIV 000 d ▶ 0.000 dB 0. (Number of samples: 5 pairs) 0.04000000 GHz 40.000000000 0.04000000 GHz 40.00000000 S21 TRANS LOG MAG S22 REFL LOG MAG. 0.200 dB/DIV ▶ 0.000 dE 0.000 dE 10.000 dB/DIV 0.04000000 40.00000000 0.04000000 GH: 40.000000000

**Test configuration** 



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

#### Interface Mating Dimensions of KPC292 (2.92 mm Connectors)



Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>

MCO Kawashima Manufacturing Co., Ltd. ISO9001:14001 Certified

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

TEL: +81-44-911-7073 https://kmco.co.jp/en/

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

Rev. 03 June 2017



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



1 mm

Up to 110 GHz



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

Up to 67 GHz

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

1 mm/1.85 mm

9E-	
<u> </u>	





2.4 mm /1.85 mmUp to 50 GHz2.92 mm/1.85 mmUp to 40 GHz2.92 mm/2.4 mmUp 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)

ashima Manufacturing Co., Ltd. < All rights re



Copyright(C) 2002-202

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 <sup>(*)</sup>	Up to 40 GHz

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

Subject to Change Without Notice

# **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.

# **SPECIFICATIONS**

See below table.

#### **CABLE PROPERTIES Outer Conductor**

Center Conductor Insulator Moding Frequency Delay Time Inside Bending Radius "Non-Magnetic"

1.19 mm Diameter Copper with Cu/Sn/Zn Plated Silver Plated Copper PTFE 112 GHz (Approx.) 0.476 ns/100 mm 3 mm (min)



**Production Status** 2 Weeks Lead-Time for Shipping

All materials are "lead free".

[\*] Please specify length (L: DDD 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)
						30 to 300 mm
	1 mm	DC-110 GHz	> 17 dB	See Fig.1	-55 to +100 °C	+/-1 mm [*] (Over 301 mm:
						Negotiable)

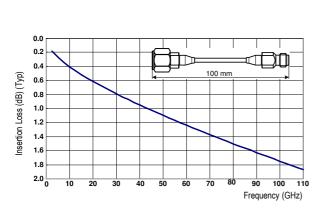


Fig.1 Frequency vs Insertion Loss, L=100 mm

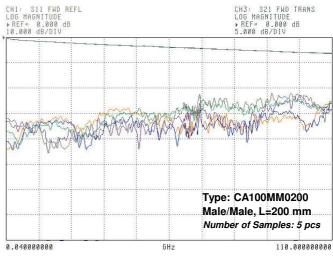
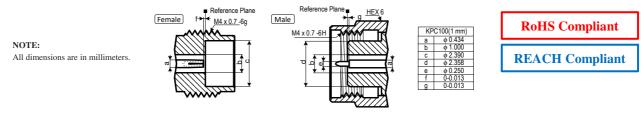


Fig. 2 Typical Performance

#### Interface Mating Dimensions of KPC100 (1 mm Connectors)



Specifications Subject to Change Without Notice

Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.

K MCO Kawashima Manufacturing Co., Ltd. SO9001:14001 Certified

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

TEL: +81-44-911-7073 FAX: +81-44-911-9621 https://kmco.co.jp/en/

e-mail: sales@kmco.co.jp

Rev. 03 June 2017

# 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 Center Conductor Insulator Moding Frequency Delay Time Inside Bending Radius "Non-Magnetic" 2.2 mm Diameter Copper with Cu/Sn/Zn Plated Silver Plated Copper Solid PTFE 61 GHz (Approx.) 0.476 ns/100 mm 3.2 mm (min)



Production Status 2 Weeks Lead-Time for Shipping

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 <u>Hand Bender 2200</u> In order to prevent any damage in the joint part of the cable and the connector, please bend the cable about 4 mm away

**RoHS Compliant** 

**REACH Compliant** 

4 mm (Approx.)

Pre-Bend (10-20 deg.)

from the joint part

Full-Bend

(90 deg.)

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

	Connector	Fraguanau	Return	Incertion	Tamparatura	
TYPE	Connector	Frequency		Insertion	Temperature	Length (L)
	Interface	Range	Loss	Loss	Range	0 ( )
CA185FF DDDD Female/Female CA185MF DDDD Male/Female CA185MM DDDD	 1.85 mm	DC-60 GHz	> 18 dB			
CA240FF DDD Female/Female CA240MF DDDD Male/Female CA240MM DDDD Male/Male	2.4 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)
CA292FF CA292FF CA292FF CA292FF CA292FF CA292FF CA292MF CA292M	2.92 mm	DC-40 GHz	> 20 dB			(logoliobio)

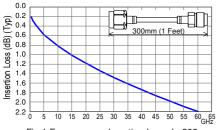


Fig.1 Frequency vs Insertion Loss, L=300 mm

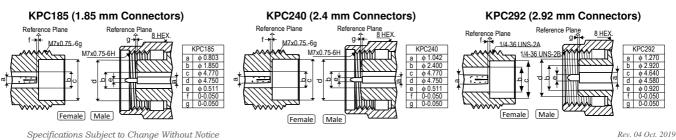
NOTE: All dimensions are in millimeters.

---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



Fig.2 Tightening the Nut

#### Connector Interface Mating Dimensions



Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>



Kawashima Manufacturing Co., Ltd.

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

TEL: +81-44-911-7073 FAX: https://kmco.co.jp/en/ e-mai

# **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.

**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

All materials are "lead free".

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

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

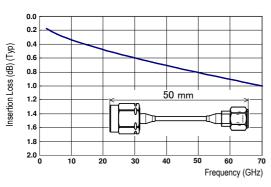
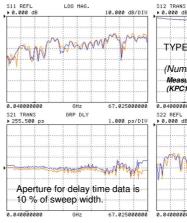
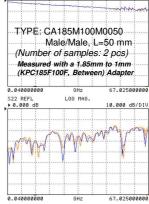


Fig.1 Estimated Insertion Loss, Including Adaptor



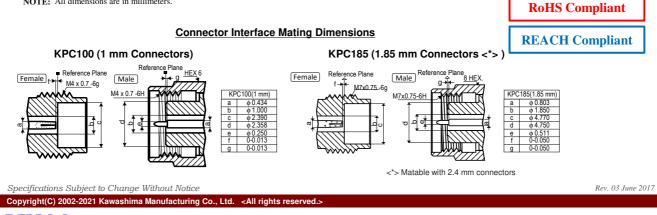


LOG MAG.

1.000 dB/DIU

Fig.2 Typical Performance

NOTE: All dimensions are in millimeters.



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

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

TEL: +81-44-911-7073 https://kmco.co.jp/en/

# **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 Center Conductor Insulator Moding Frequency **Delay Time** Inside Bending Radius "Non-Magnetic"

2.2 mm Diameter Copper with Cu/Sn/Zn Plated Silver Plated Copper Solid PTFE 61 GHz (Approx.) 0.476 ns/100 mm 3.2 mm (min)



Production Status 2 Weeks Lead-Time for Shipping

Reference for

Minimum Cable Installation Space by Rounded Re-Forming

Hand Bender 2200

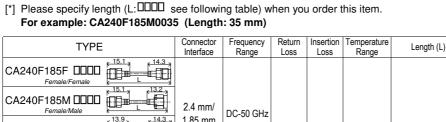
CAUTION:

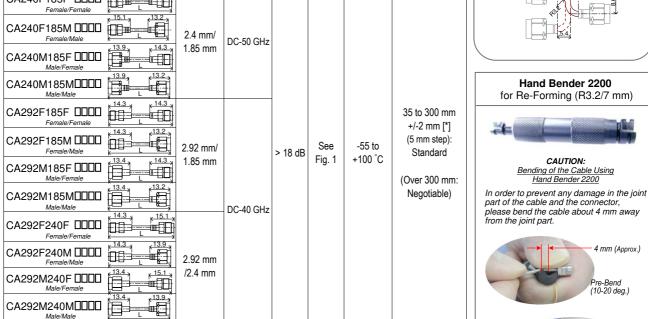
Using

4 mm (Approx.)

Pre-Bend (10-20 deg.)

Bending of the Cable U Hand Bender 2200





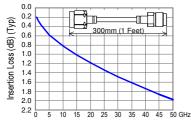


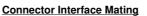
Fig.1 Frequency vs Insertion Loss, L=300mm

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.

---CAUTION--



Fig.2 Tightening the Nut

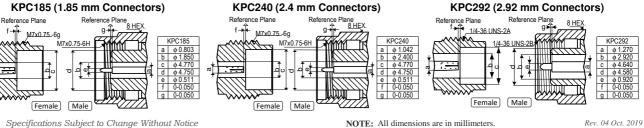




**RoHS Compliant** 

**REACH Compliant** 

Full-Bend (90 deg.)



Specifications Subject to Change Without Notice Copyright(C) 2002-2021 Kawashima Manufacturing Co., Ltd. < All rights reserved.>



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

TEL: +81-44-911-7073 https://kmco.co.jp/en/

# 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

measurement, instrument, and system applications.

All materials are "lead free".

\*SMPM: conforms to MIL-STD-348B 328.1

#### SPECIFICATIONS

Electrical: See below table.

#### **CABLE PROPERTIES**

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



Production Status 2 Weeks Lead-Time for Shipping

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

	Connector	Frequency	Return	Insertion	Temperature	
TYPE	Interface	Range	Loss	Loss	Range	Length (L)
CA185F119SMPM DDDD Female/SMPM Female 14.6 CA185M119SMPM DDDD Male/SMPM Female 13.4 T.1	1.85 mm /SMPM	DC-65 GHz	< 13 GHz: > 22 dB 13-48 GHz: > 16 dB 48-65 GHz: > 12 dB			
CA240F119SMPM DDDD Female/SMPM Female CA240M119SMPM DDDD Male/SMPM Female 14.3	2.4 mm /SMPM	DC-50 GHz	< 13 GHz: > 22 dB 13-38 GHz: > 16 dB 38-50 GHz: > 13 dB	See Fig. 1	-55 to +100 °C	25 to 300 mm +/-2 mm [*] (Over 300 mm: Negotiable)
CA292F119SMPM DDDD 14.7	2.92 mm /SMPM	DC-40 GHz	< 13 GHz: > 22 dB 13-35 GHz: > 16 dB			
CA292M119SMPM DDDD Male/SMPM Female			35-40 GHz: > 13 dB			
Typical Performance including Coaxial Adapters for SMPM	0.500 d5/D10		[GHz] 15 20 25 30 35 40 45 50 55 60 65 Jency vs Insertion Loss	When you assembly, the section close to the your fingers tightening to This cable a thin copp could be ea by applying	the nut. is composed o er tube and asily damaged g a twist stress.	f f
SII REFL LOG MAG. SI2 TRANS LOG MAG. ▶ 0.000 dB 10.000 dB/DIU ▶ 0.000 dB	0.500 dB/DIV			<b>Hand Ben</b> r Re-Formin	<b>der 1200</b> g (R3/6 mm)	
6 x CA240F119SMPM0050 (Blue)		Be	UTION: nding of the cable using d Bender 1200		Pre-Bend (10-20deg)	4mm (Appr
6 х СА240М1 19SMPM0050 (Orange в. всеевееее они	e) 50.00000000	In	order to prevent any dam the cable and the connec	age in the jo tor, please b	int part end	Full- Bend





Specifications Subject to Change Without Notice Copyright(C) 2002-2024 Kawashima Manufacturing Co., Ltd. <All rights reserved.>

KMCO

Kawashima Manufacturing Co., Ltd.

1-3-5 Higashi-ikuta, Tama-ku, TEL: +81-44-911-7073 Kawasaki 214-0031 JAPAN https://kmco.co.jp/en/ Rev. 04 Jun. 2024

# 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.

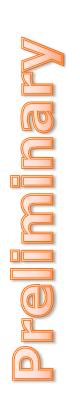
# **CABLE PROPERTIES**

**Outer Conductor** Center Conductor Insulator Moding Frequency **Delay Time** Inside Bending Radius "Non-Magnetic"

1.19 mm Diameter **Tin-Soaked Copper Wire Braid** Silver Plated Copper Solid PTFE 112 GHz (Approx.) 0.476 ns/100 mm 2 mm (min)

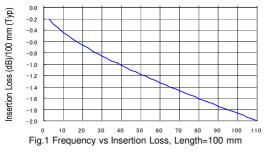


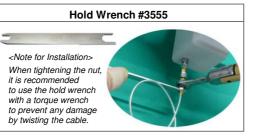
[\*] Please specify length (L: DDD see following table) when you order this item. For example: SFCA100MM0050 (Length: 50 mm)

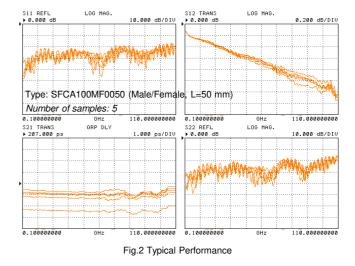


	TYPE	Connector Interface	Frequency Range	Return Loss	Insertion Loss	Temperature Range	Length (L)
;	SFCA100FF						
;	SFCA100MF	1 mm	DC-110 GHz	> 15 dB	See Fig. 1	-30 to +100 °C	30 to 150 mm +/-1 mm [*] (Over 150 mm:
;							Negotiable)

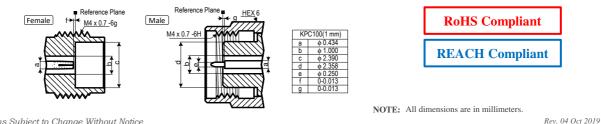
(\*) Jacket (UL certified heat shrink tube) for cable braid protection







### Interface Mating Dimensions of KPC100 (1 mm Connectors)



Specifications Subject to Change Without Notice



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

TEL: +81-44-911-7073 https://kmco.co.jp/en/

# 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-348B NOTICE 5 328.1. SMPM female interface

#### **SPECIFICATIONS**

**Electrical:** 

See below table.

### **CABLE PROPERTIES**

Outer Conductor Center Conductor Insulator Moding Frequency Delay Time Inside Bending Radius "Non-Magnetic"

1.19 mm Diameter **Tin-Soaked Copper Wire Braid** Silver Plated Copper Solid PTFE 112 GHz (Approx.) 0.476 ns/100 mm 2 mm (min)

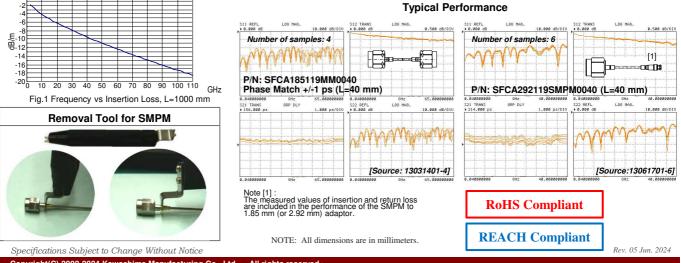


2 Weeks Lead-Time for Shipping

[\*\*] Please specify length (L: DDD 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 DDDD Female/Female								
SFCA185119MF	1.85 mm	DC-65 GHz (Within)						
SFCA185119MM								
SFCA292119FF								
SFCA292119MF	2.92 mm	DC-40 GHz (Within)		> 17 dB			2°C +/-2 mm [**] 0°C Standard	
SFCA292119MM							35 to 150 mm	
SFCA292F119185F					See	-55 to +100 °C (-30 to +100 °C	+/-2 mm [**]	Available (UL Certified
SFCA292M119185F	2.92 mm	DC-40 GHz				Fig.	Fig. 1	for Jacket Type)
SFCA292F119185M DDDD Female/Male	/1.85 mm	(Between)				·		
SFCA292M119185MDDDD Male/Male								
SFCA185F119SMPM	1.85 mm /SMPM	DC-65 GHz	< 13 GHz: > 22 dB 13-48 GHz: > 16 dB					
SFCA185M119SMPM	[1]	(Between)	48-65 GHz > 12 dB					
SFCA292F119SMPM DDDD Female/Female	2.92 mm /SMPM	DC-40 GHz	z > 16 dB					
SFCA292M119SMPM	[1]	(Between)						



Copyright(C) 2002-2024 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 https://kmco.co.jp/en/