

021

- Static bending
- Temperature change
- Frequency 26.5 GHz
- Temperature range -30~+85°C
- Minimum bending radius 30mm
- RoHS compliant
- Measurement
- Armored
- Multi-lock
- Delivery time 5 days
- Listed in the catalogue, manufactured to order
- Custom support



Property

Electrical properties

Maximum operating frequency	26.5 GHz
Characteristic impedance	50±1 Ω
Capacitance (typ.)	85 pF/m
Propagation delay (typ.)	4.21 ns/m
Velocity of Propagation (typ.)	79 %
Higher mode frequency (typ.)	28 GHz
VSWR (per connector/both ends of assy)	1.153/1.33
Maximum frequency insertion loss (26.5 GHz)	2.0 dB/m

Mechanical properties

Cable outer diameter	8.5 mm
Minimum bending radius (inner side)	30 mm
Cable mass (typ.)	122 g/m
Continuous operating temperature range	-30~+85 °C
Armored side pressure	196N/cm
Assembly length	700~1,500 mm

Example 021

Assembly length : 1000 mm
 Connector I : 3.5 mm (f) straight
 Connector II : 3.5 mm (m) straight
 Catalog No.: MWX021-01000DFSDMS/B

- a: Cable
- b: Assembly length
- c: Connector
- d: Armored

Order form example

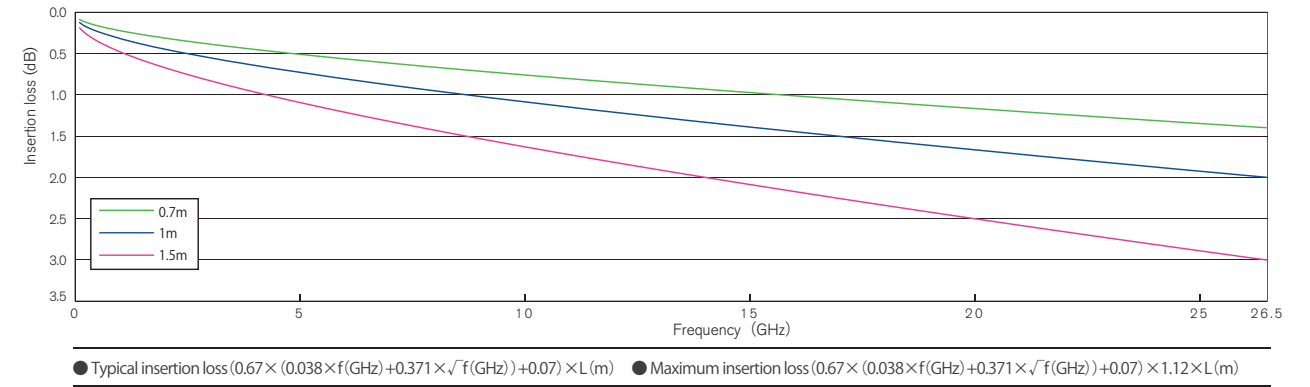
Please provide the following information when placing an order.

* See P.25*Connector combination codes*

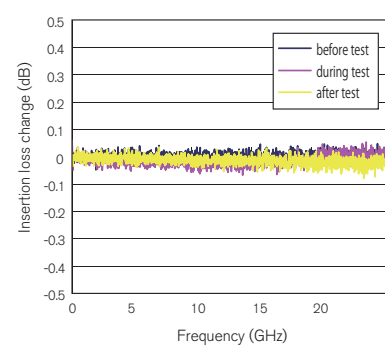
a b c d

Technical Data

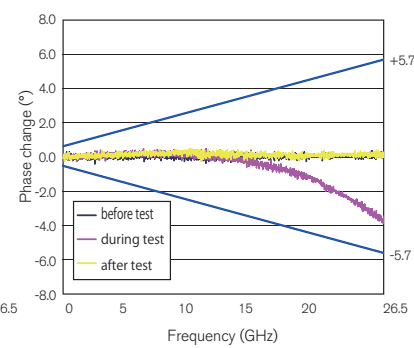
Cable typical insertion loss



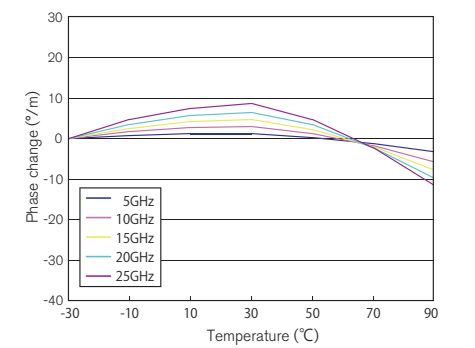
Static bending data (insertion loss, phase)



Bending radius: 30 mm



Phase change vs. temperature



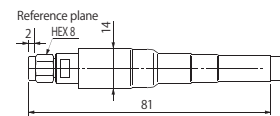
* Guaranteed value within ±5.7° at 26.5 GHz (In shipping value)
 * The cable was wrapped 360° around φ60mm mandrel.

The cable was measured in chamber every 20 °C from -30 to 90 °C, 1 hour after the temperature changed. Figure shows the excellent phase stability over the temperature changes.

Connector

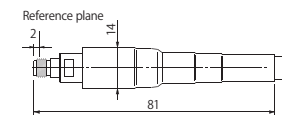
SMA (m) straight (Code:AMS)

Maximum operating frequency: 18.5 GHz / Mass: 18g



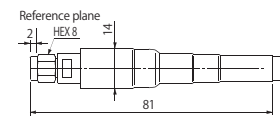
SMA (f) straight (Code:AFS)

Maximum operating frequency: 18.5 GHz / Mass: 17g



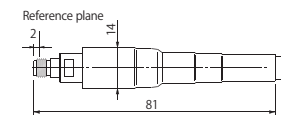
3.5mm (m) straight (Code:DMS)

Maximum operating frequency: 26.5 GHz / Mass: 18g



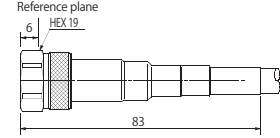
3.5mm (f) straight (Code:DFS)

Maximum operating frequency: 26.5 GHz / Mass: 17g



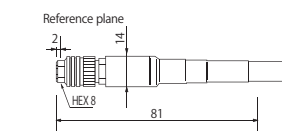
N (m) straight (Code:NMS)

Maximum operating frequency: 18.0 GHz / Mass: 4.3g



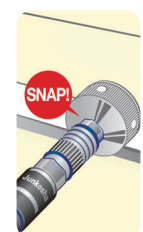
3.5mm (m) Multi-Lock Type (Code:DMP)

Maximum operating frequency: 26.5 GHz / Mass: 24g



* The above figures are measured values for reference only.

3.5mm Connector "Multi-Lock Type" 3 WAYS FOR COUPLING



Snap-on Coupling

Coupling without screwing. Insert the cable connector and slide the coupling nut forward. It helps to reduce workload for users who have repeating insertion and extraction, such as production and testing line.



Hand Screw Coupling

After snap-on coupling, becomes stable. screw the coupling nut, then the connection. This connector made the work-load 1/3 compared to the conventional ones.



Torque Wrench Coupling

Torque wrench management for more accurate measurement, such as calibration.

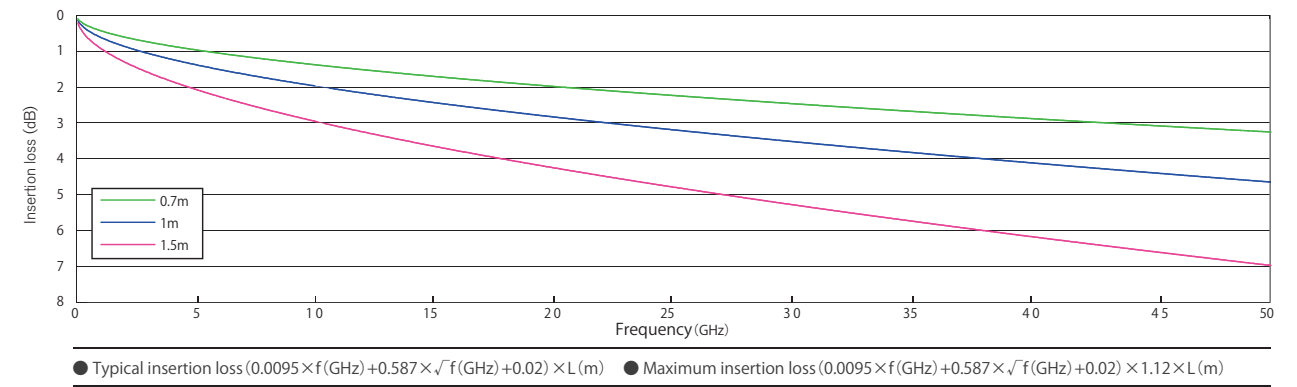
051

- Static bending
- Temperature change
- Frequency 50.0 GHz
- Temperature range -30~+85°C
- Minimum bending radius 30mm
- RoHS compliant
- Measurement
- Armored
- Delivery time 5 days
- Listed in the catalogue manufactured to order
- Custom support

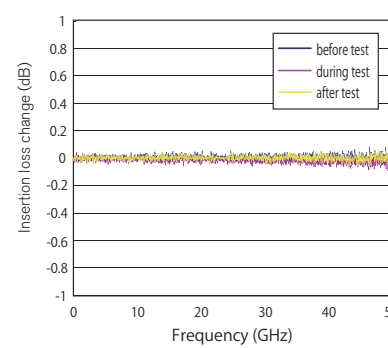


Technical Data

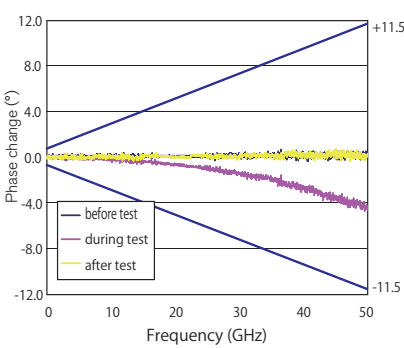
Cable typical insertion loss



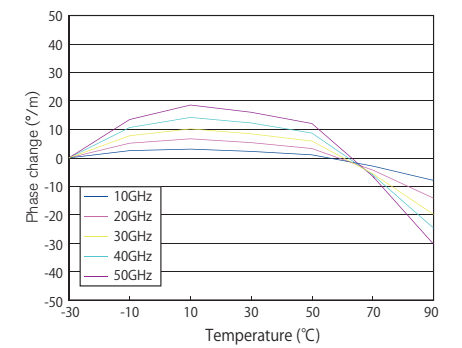
Static bending data (insertion loss, phase)



Bending radius: 30 mm



Phase change vs. temperature



*Guaranteed value within $\pm 11.5^\circ$ at 50 GHz (In shipping value).
*The cable was wrapped 360° around $\phi 60\text{mm}$ mandrel.

The cable was measured in chamber every 20 °C from -30 to 90 °C, 1 hour after the temperature changed. Figure shows the excellent phase stability over the temperature changes.

Property

Electrical properties

Maximum operating frequency	50.0 GHz
Characteristic impedance	$50 \pm 1 \Omega$
Capacitance (typ.)	85 pF/m
Propagation delay (typ.)	4.19 ns/m
Velocity of Propagation (typ.)	79 %
Higher mode frequency (typ.)	61 GHz
VSWR (per connector/both ends of assy.)	1.21 / 1.46
Maximum frequency insertion loss (50.0 GHz)	4.6 dB/m

Mechanical properties

Cable outer diameter	6.6 mm
Minimum bending radius (inner side)	30 mm
Cable mass (typ.)	76 g/m
Continuous operating temperature range	-30 ~ +85 °C
Armored side pressure	196 N/cm
Assembly length	700 ~ 1,500 mm

Example 051

Assembly length : 1000mm
 Connector I : 2.4 mm (f) straight
 Connector II : 2.4 mm (m) straight
 Catalog No.: MWX051-01000LFLSMB/B

- a:Cable
- b:Assembly length
- c:Connector
- d:Armored

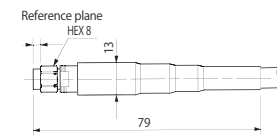
Order form example

Please provide the following information when placing an order.

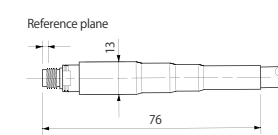
* See P.25 "Connector combination codes"

Connector

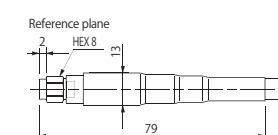
2.4 mm (m) straight (Code:LMS)
 Maximum operating frequency: 50.0 GHz / Mass: 11g



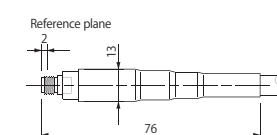
2.4 mm (f) straight (Code:LFS)
 Maximum operating frequency: 50.0 GHz / Mass: 14g



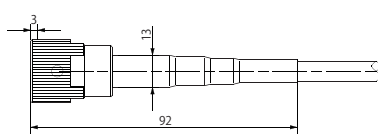
2.92 mm (m) straight (Code:KMS)
 Maximum operating frequency: 40.0 GHz / Mass: 12g



2.92 mm (f) straight (Code:KFS)
 Maximum operating frequency: 40.0 GHz / Mass: 14g



NMD 2.4mm (f) straight (Custom-made)
 Maximum operating frequency: 50.0 GHz / Mass: 60g



Option

Non-armored type (2.4 mm and 2.92 mm connector) can be used for MWX 051. Please contact us.



*The above figures are measured values for reference only.

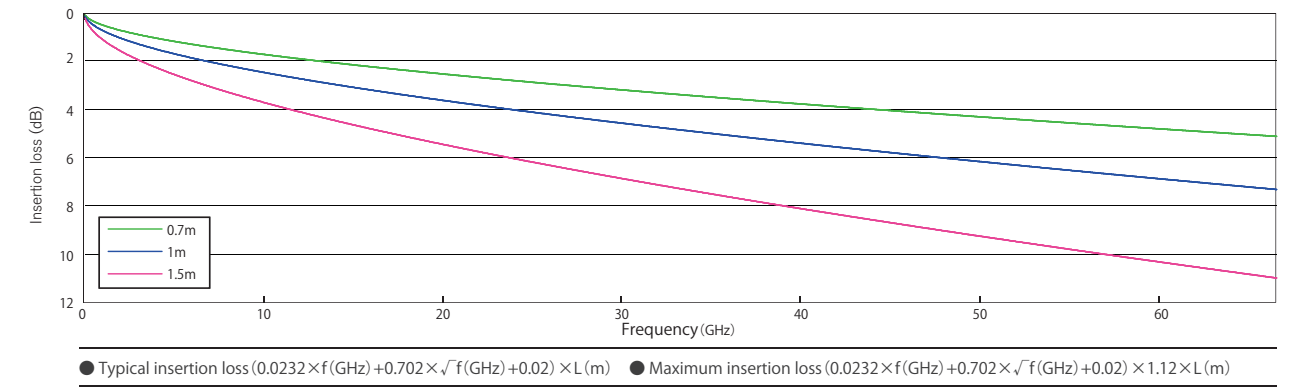
061

- Static bending
- Temperature change
- Frequency 67.0 GHz
- Temperature range -30~+85°C
- Minimum bending radius 30mm
- RoHS compliant
- Measurement
- Armored
- Delivery time 5 days
- Listed in the catalogue manufactured to order
- Custom support

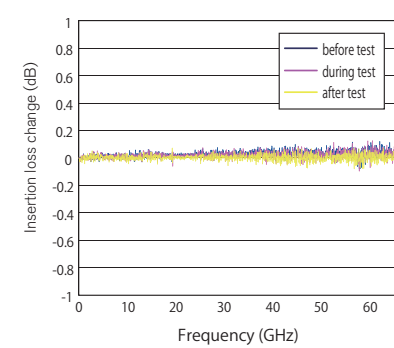


Technical Data

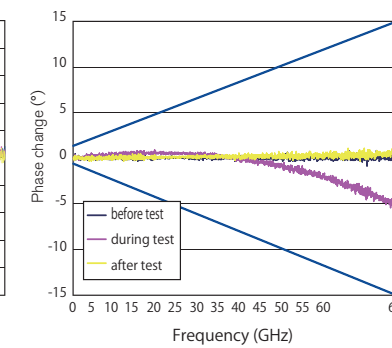
Cable typical insertion loss



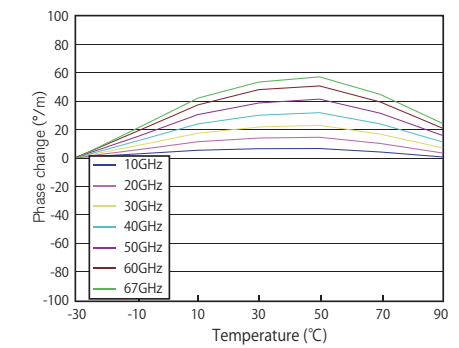
Static bending data (insertion loss, phase)



Bending radius: 30 mm



Phase change vs. temperature



*Guaranteed value within $\pm 15^\circ$ at 67 GHz (In shipping value).
*The cable was wrapped 360° around $\phi 60\text{mm}$ mandrel.

The cable was measured in chamber every 20 °C from -30 to 90 °C, 1 hour after the temperature changed. Figure shows the excellent phase stability over the temperature changes.

Property

Electrical properties

Maximum operating frequency	67.0 GHz
Characteristic impedance	$50 \pm 1 \Omega$
Capacitance (typ.)	90 pF/m
Propagation delay (typ.)	4.35 ns/m
Velocity of Propagation (typ.)	77 %
Higher mode frequency (typ.)	70 GHz
VSWR (per connector/ both ends of assy.)	1.21 / 1.46
Maximum frequency insertion loss (67.0 GHz)	7.3 dB/m

Mechanical properties

Cable outer diameter	6.6 mm
Minimum bending radius (inner side)	30 mm
Cable mass (typ.)	73 g/m
Continuous operating temperature range	-30 ~ +85 °C
Armored side pressure	196 N/cm
Assembly length	700 ~ 1,500 mm

Example 061

Assembly length: 700 mm
 Connector I : 1.85 mm (f) straight
 Connector II : 1.85 mm (m) straight
 Catalog No.: MWX061-00700VFSVMS/B

- a: Cable
- b: Assembly length
- c: Connector
- d: Armored

Order form example

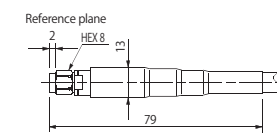
Please provide the following information when placing an order.

* See P.25 "Connector combination codes"

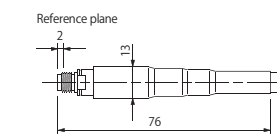
a b c d

Connector

1.85 mm (m) straight (Code:VMS)
 Maximum operating frequency: 67.0 GHz / Mass: 11g



1.85 mm (f) straight (Code:VFS)
 Maximum operating frequency: 67.0 GHz / Mass: 14g



Option

Non-armored type (1.85mm connector) can be used for MWX 061. Please contact us.



* The above figures are measured values for reference only.

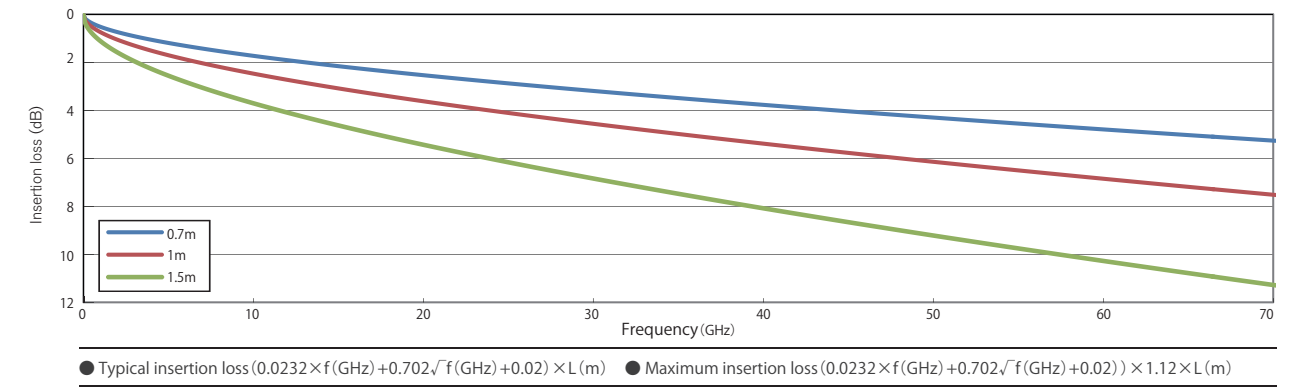
071

- Static bending
- Temperature change
- Frequency 70.0 GHz
- Temperature range -30~+85°C
- Minimum bending radius 30mm
- RoHS compliant
- Measurement
- Armored
- Delivery time 5 days
- Listed in the catalogue manufactured to order
- Custom support

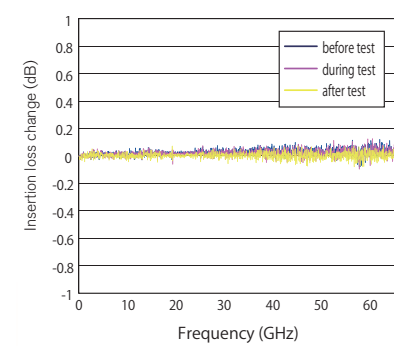


Technical Data

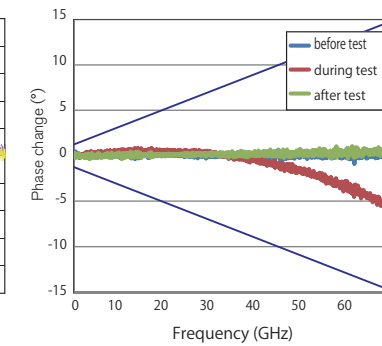
Cable typical insertion loss



Static bending data (insertion loss, phase)

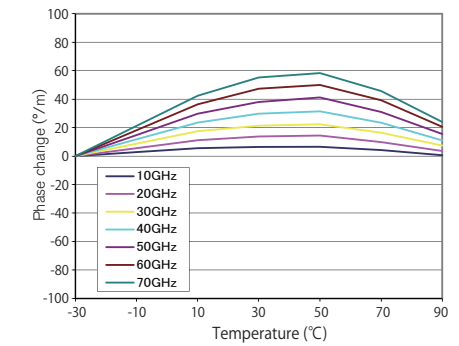


Bending radius: 30 mm



*Guaranteed value within $\pm 15^\circ$ at 70 GHz (In shipping value).
*The cable was wrapped 360° around $\phi 60\text{mm}$ mandrel.

Phase change vs. temperature



The cable was measured in chamber every 20 °C from -30 to 90 °C, 1 hour after the temperature changed. Figure shows the excellent phase stability over the temperature changes.

Property

Electrical properties

Maximum operating frequency	70.0 GHz
Characteristic impedance	$50 \pm 1 \Omega$
Capacitance (typ.)	90 pF/m
Propagation delay (typ.)	4.35 ns/m
Velocity of Propagation (typ.)	77 %
Higher mode frequency (typ.)	70 GHz
VSWR (per connector/ both ends of assy.)	1.21 / 1.46
Maximum frequency insertion loss (70.0 GHz)	7.5 dB/m

Mechanical properties

Cable outer diameter	6.6 mm
Minimum bending radius (inner side)	30 mm
Cable mass (typ.)	73 g/m
Continuous operating temperature range	-30 ~ +85 °C
Armored side pressure	196 N/cm
Assembly length	700 ~ 1,500 mm

Example 071

Assembly length: 700 mm
Connector I : 1.85 mm (f) straight
Connector II : 1.85 mm (m) straight

Catalog No.: MWX071-00700VFSVMS/B

a b c d

- a: Cable
- b: Assembly length
- c: Connector
- d: Armored

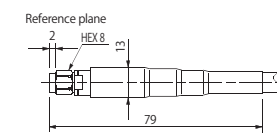
Order form example

Please provide the following information when placing an order.

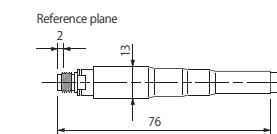
* See P.25 "Connector combination codes"

Connector

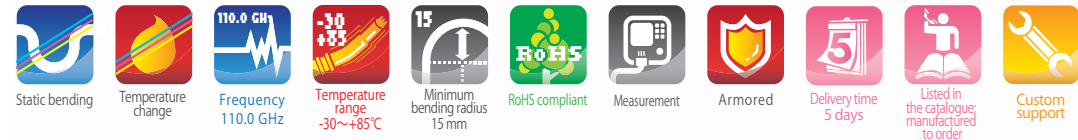
1.85 mm (m) straight (Code:VMS)
Maximum operating frequency: 67.0 GHz / Mass: 11g



1.85 mm (f) straight (Code:VFS)
Maximum operating frequency: 67.0 GHz / Mass: 14g



* The above figures are measured values for reference only.



Property

Electrical properties

Maximum operating frequency	110.0 GHz
Characteristic impedance	standard 50 Ω
Capacitance (typ.)	88 pF/m
Propagation delay (typ.)	4.2 ns/m
Velocity of Propagation (typ.)	79 %
Higher mode frequency (typ.)	110 GHz
VSWR (per connector/ both ends of assy.)	1.197/1.43
Maximum frequency insertion loss (110.0 GHz)	11.8dB/m

Mechanical properties

Cable outer diameter	4.0 mm
Minimum bending radius (inner side)	15 mm
Cable mass (typ.)	50 g/m
Continuous operating temperature range	-30~+85 °C
Armored side pressure	157 N/cm
Assembly length	100~200 mm

Example 001

Assembly length: 100 mm
 Connector I : 1.0 mm (f) straight
 Connector II : 1.0 mm (m) straight

Catalog No.: MWX001-00100WFSWMT/B

a b c d

a:Cable
 b:Assembly length
 c:Connector
 d:Armored

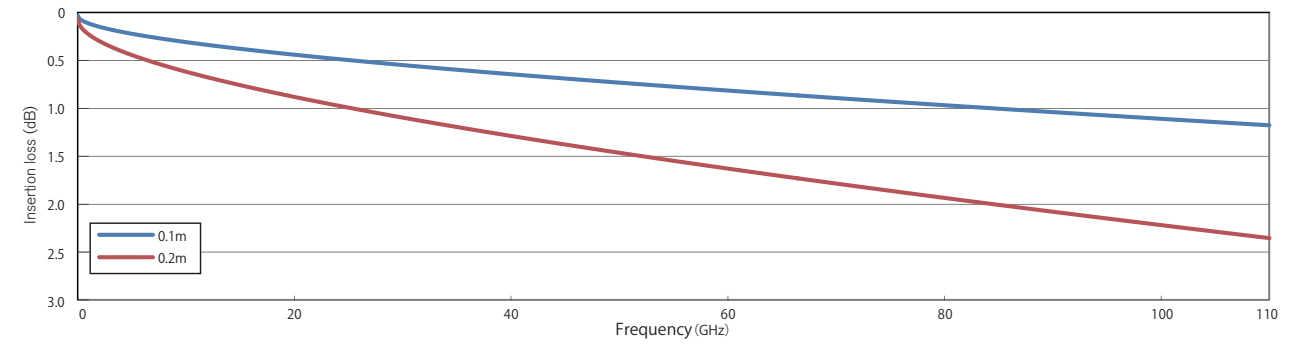
Order form example

Please provide the following information when placing an order.

* See P.25 "Connector combination codes"

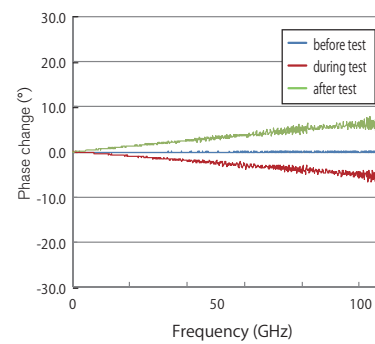
Technical Data

Cable typical insertion loss



● Typical insertion loss $0.86X(0.035 \times f(\text{GHz}) + 0.9 \times \sqrt{f(\text{GHz})} + 0.4) \times L(\text{m})$ ● Maximum insertion loss $0.86X(0.035 \times f(\text{GHz}) + 0.9 \times \sqrt{f(\text{GHz})} + 0.4) \times 1.12 \times L(\text{m})$

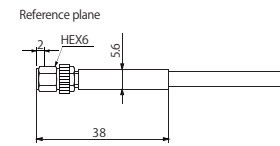
Static bending data (insertion loss, phase) Bending radius: 15 mm



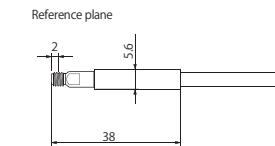
* The cable was wrapped 90° around φ30mm mandrel.

Connector

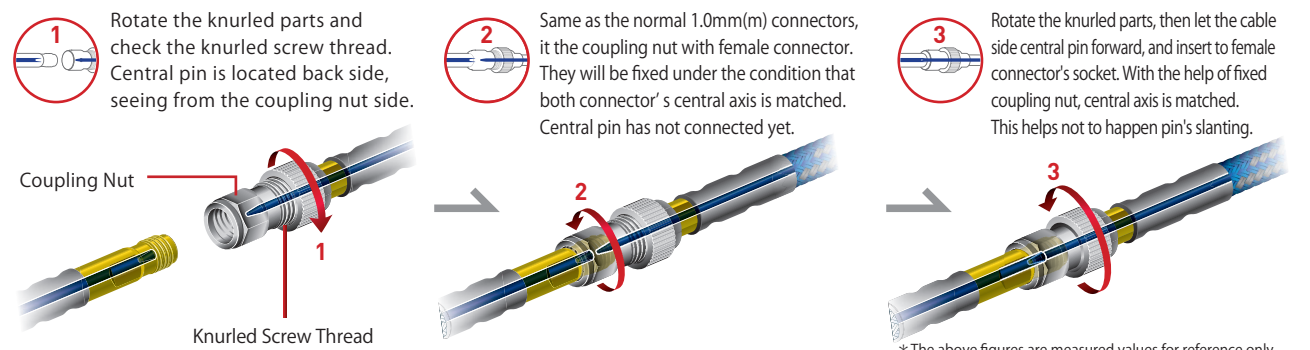
1.0mm(m) Safty Lock (Code:WMT)
 Maximum operating frequency: 110.0GHz / Mass:4g



1.0mm(f)straight (Code:WFS)
 Maximum operating frequency: 110.0GHz / Mass:2g



How to use "safety lock mechanism" of 1.0mm(m) connector



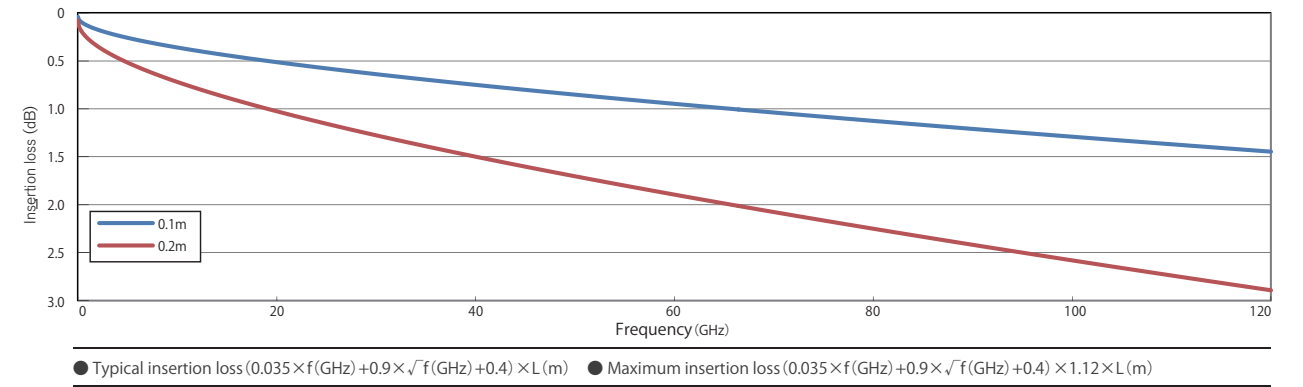
* The above figures are measured values for reference only.

002

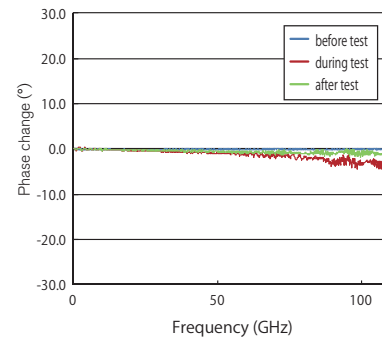


Technical Data

Cable typical insertion loss



Static bending data (insertion loss, phase) Bending radius: 15 mm



* The cable was wrapped 90° around φ30mm mandrel.

Property

Electrical properties

Maximum operating frequency	120.0 GHz
Characteristic impedance	50 Ω
Capacitance (typ.)	88 pF/m
Propagation delay (typ.)	4.2 ns/m
Velocity of Propagation (typ.)	79 %
Higher mode frequency (typ.)	120 GHz
VSWR (per connector/ both ends of assy.)	1.197/1.43
Maximum frequency insertion loss (120.0 GHz)	14.5 dB/m

Mechanical properties

Cable outer diameter	4.0 mm
Minimum bending radius (inner side)	15 mm
Cable mass (typ.)	50 g/m
Continuous operating temperature range	-30~+85 °C
Armored side pressure	157 N/cm
Assembly length	100~200 mm

Order form example

●002 for up to 120GHz is a under developing product. Please contact us.

●002 for up to 110GHz is a already released product. Please order it as below.

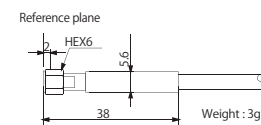
Up to 110 GHz (Already Released)
 Assembly length: 150 mm
 Connector I : 1.0 mm (f) straight
 Connector II : 1.0 mm (m) straight
 Catalog No.:
 MWX002-00150WFS1WMS1/B

- a:Cable
- b:Assembly length
- c:Connector
- d:Armored

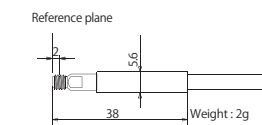
Connector

Up to 120 GHz: Enhanced 1.0mm Connector (Please contact us.)

1.0 mm (m) straight (Code:WMS)
 Maximum operating frequency:120.0GHz/ Mass:3g

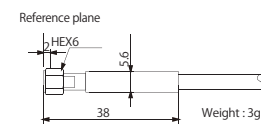


1.0 mm (f) straight (Code:WFS)
 Maximum operating frequency:120.0GHz/ Mass:2g

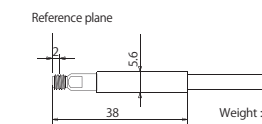


Up to 110 GHz: Standard 1.0mm Connector (Already released)

1.0mm(m) straight (Code: WMS1)
 Maximum operating frequency:120.0GHz/ Mass:3g



1.0mm(f) straight (Code: WFS1)
 Maximum operating frequency:120.0GHz/ Mass:2g



* The above figures are measured values for reference only.



Property

Electrical properties

Maximum operating frequency	145.0 GHz
Characteristic impedance	standard 50 Ω
Capacitance (typ.)	90 pF/m
Propagation delay (typ.)	4.5 ns/m
Velocity of Propagation (typ.)	74 %
Higher mode frequency (typ.)	145 GHz
VSWR (per connector/ both ends of assy.)	1.23/ 1.50

Mechanical properties

Cable outer diameter	4.0 mm
Minimum bending radius (inner side)	20 mm
Cable mass (typ.)	50 g/m
Continuous operating temperature range	-30~+85 °C
Armored side pressure	157 N/cm
Assembly length	100~200 mm

Order form example

Please provide the following information when placing an order.

Example 004

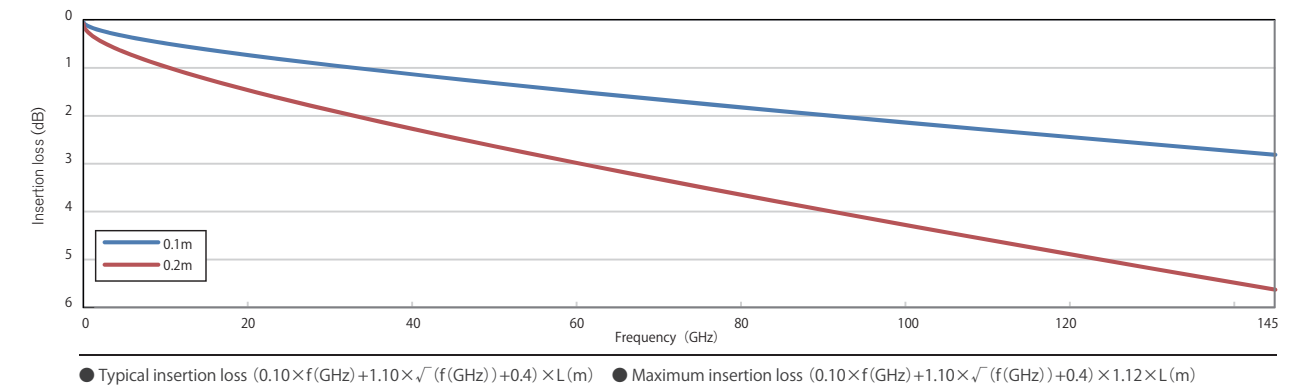
Assembly length: 100 mm
 Connector I : 0.8 mm (f) straight
 Connector II : 0.8 mm (m) straight
 Catalog No.: MWX001-00100MFSMMT/B

- a: Cable
- b: Assembly length
- c: Connector
- d: Armored

a b c d

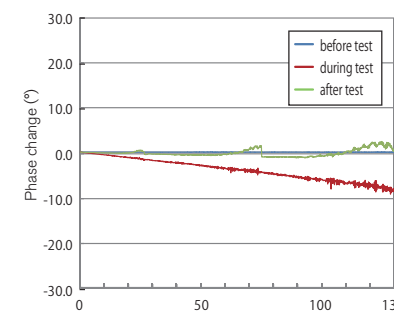
Technical Data

Cable typical insertion loss



Static bending data (insertion loss, phase)

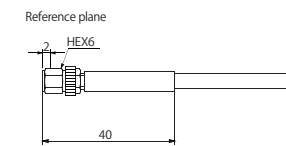
Bending radius: 15 mm



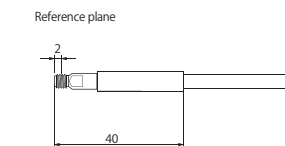
* The cable was wrapped 90° around φ30mm mandrel.

Connector

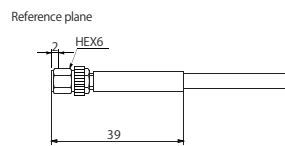
1.0mm(m) Safty Lock (Code:WMT)
 Maximum operating frequency: 130.0GHz / Mass:4g



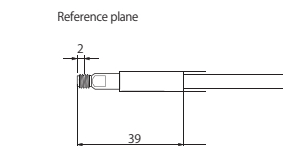
1.0mm(f)straight (Code:WFS)
 Maximum operating frequency: 130.0GHz / Mass:2g



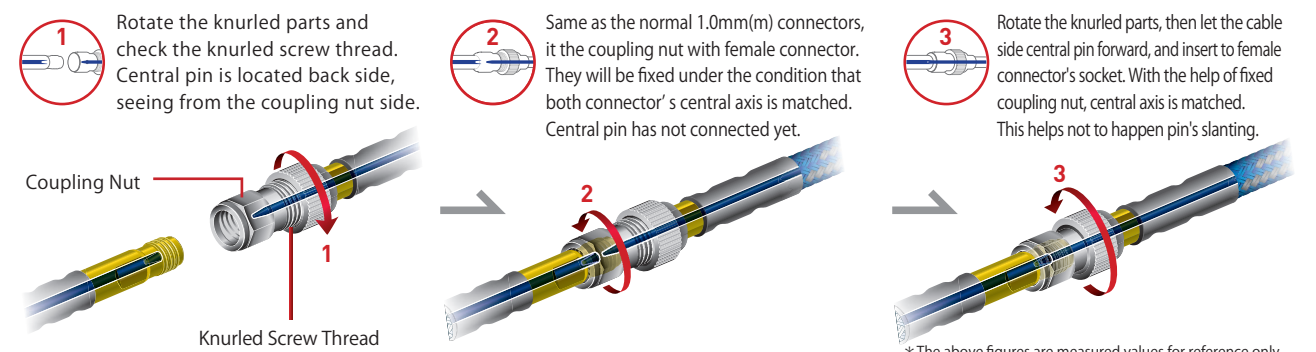
0.8mm(m) Safty Lock (Code:MMT)
 Maximum operating frequency: 145.0GHz / Mass:4g



0.8mm(f)straight (Code:MFS)
 Maximum operating frequency: 145.0GHz / Mass:2g



How to use "safety lock mechanism" of 1.0mm(m) and 0.8(mm) connector



* The above figures are measured values for reference only.