

2 Series Flexible Cable Assemblies for Measuring Instruments

241

Features

- Phase Stability: Static Bending
- Cable Flexibility
- Maximum Operating Frequency: 40.0 GHz
- Temperature Range: -30 to 85°C
- Days to Ship: 11 Business Days
- RoHS Compliant



Property

Electrical Properties		Mechanical Properties		Standard Type	Non-Armored Type Custom-Made	Lightweight Armored Type (for Fixed Wiring)
Maximum Operating Frequency	40.0 GHz	Cable Outer Diameter	9.5 mm	9.5 mm	4.1 mm	8 mm
Characteristic Impedance (Typical)	50±1 Ω	Minimum Bending Radius (Inner Side)	20 mm	20 mm	20 mm	20 mm
Capacitance (Typical)	88 pF/m	Cable Mass (Typical)	137 g/m	137 g/m	35 g/m	98 g/m
Propagation Delay (Typical)	4.35 ns/m	Continuous Operating Temperature Range	-30~+85 °C	-30~+85 °C	-30~+85 °C	-30~+85 °C
Velocity of Propagation (Typical)	77 %	Armored Side Pressure	196 N/cm	-	-	196N/cm
Higher Mode Frequency (Typical)	40.5 GHz	Assembly Length	700~5,000 mm	700~5,000 mm	200~5,000 mm	500~5,000 mm
VSWR (Typical)	1.43	* Take care when handling the non-armored type product because its outer diameter of the cable is thin.				
Maximum frequency Insertion Loss (40.0 GHz)	3.0 dB/m					

Order Form Example

Please provide the following information when placing an order.

* See P.2-4 "Connector Codes"

Example 1
MWX241 Armored Type (Standard)

Assembly Length: 1000mm
Connector I : 2.92mm (m) Straight
Connector II : 2.92mm (m) Straight

Catalog No.
MWX241-01000KMSKMS/B



Example 2
MWX241 Non-Armored Type

* The individual specification is required.

Example 3
MWX241 Lightweight Armored Type

Assembly Length: 1000mm
Connector I : 2.92mm (m) Straight
Connector II : 2.92mm (m) Straight

Catalog No.
MWX241-01000KMSKMS/A

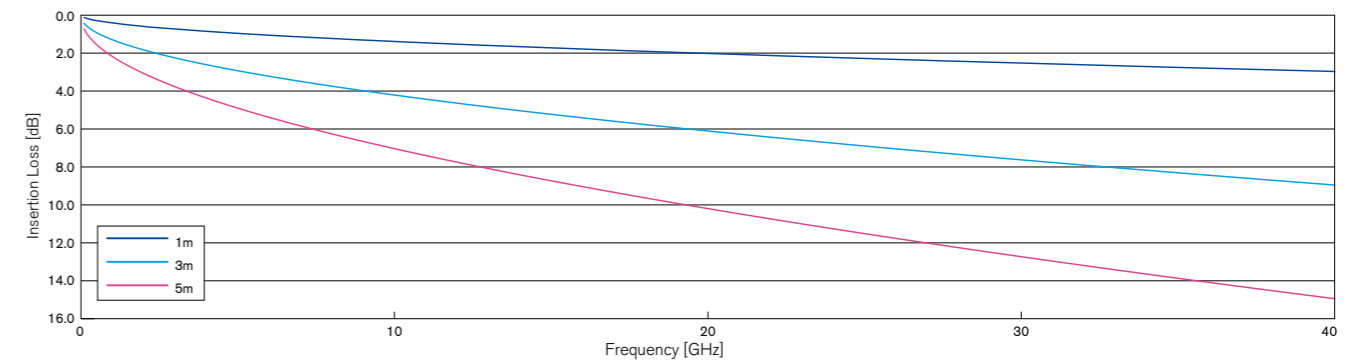


- a. Cable
- b. Assembly Length
- c. Connector
- d. Armored

Option • We can deliver products with matched phases for customers who require this characteristic.

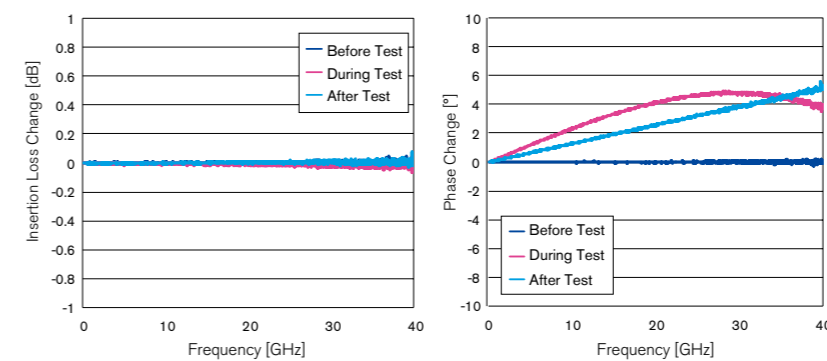
Technical Data

Cable Typical Insertion Loss



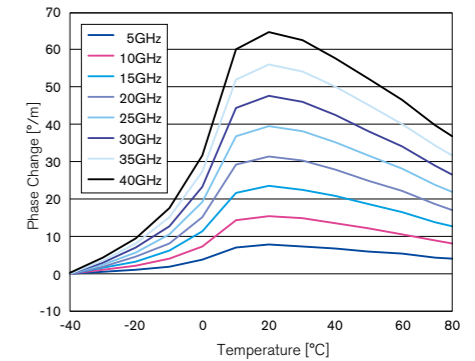
Typical Insertion Loss $(0.0095 \times f [\text{GHz}] + 0.41 \times \sqrt{f [\text{GHz}]} + 0.02) \times L [\text{m}]$ **Maximum Insertion Loss** $(0.0095 \times f [\text{GHz}] + 0.41 \times \sqrt{f [\text{GHz}]} + 0.02) \times 1.12 \times L [\text{m}]$

Static Bending Data (Insertion Loss, Phase) Bending Radius : 20 mm



* The cable was wrapped 360° around ø40mm mandrel.

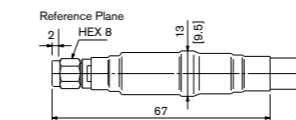
241 Phase Change vs. Temperature



The cable was measured in chamber every 20 °C from -40 to 90 °C, 1 hour after the temperature changed.

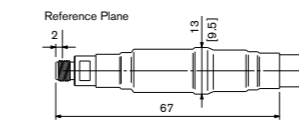
Connector

2.92mm (m) Straight (Code : KMS)



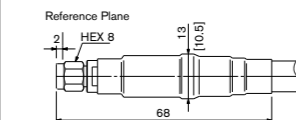
Maximum Operating Frequency : 40.0 GHz / Mass : 10g

2.92mm (f) Straight (Code : KFS)



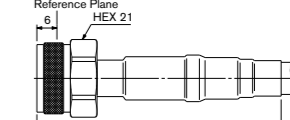
Maximum Operating Frequency : 40.0 GHz / Mass : 10g

SMA (m) Straight (Code : AMS)



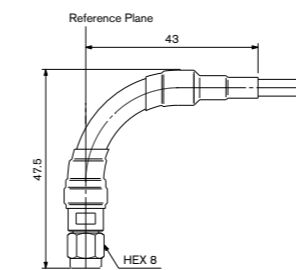
Maximum Operating Frequency : 18.5 GHz / Mass : 12g

N (m) Straight (Code : NMS)



Maximum Operating Frequency : 18.0 GHz / Mass : 42g

2.92mm (m) swept (custom-made)



Maximum Operating Frequency : 40.0 GHz / Mass : 17g

*Refer to P0-4 Connector Code Table for other applicable connectors.

* Swept and right angle are not available to armored type.

* Please see P2-13 about "customer-specified swept and right angle connectors".

* [] : Non-armored type size.