









# RF Connectors

**LK** Mechanical Lock **H** Offered as harness

Click on each product information to jump to the web.







Product Name		MHF® I LK	MHF® I	MHF® I	MHF® 4L LK	MHF® 4L	MHF® 4L	MHF® 4L	MHF® 4
Appearance									
Feature		MHF® I with Mechanical lock	Best Insertion Loss	Most Cable O.D. options	MHF® 4L with Mechanical lock	Best Insertion Loss and VSWR	Industry Standard for M.2	Industry Standard for M.2	Low profile 1.2 mm
Part Number	Plug	20278-112R-** 20351-112R-37 (O.D. 1.37 mm)	20767-001R-20	20278-112R-** 20351-112R-37 (O.D. 1.37 mm)	20632-001R-37	20632-001R-37	20565-001R-13	20572-001R-08	20611-001R
	Receptacle	20279-001E-03 (3 pads) / 20441-001E-01 (4 pads)			20449-001E-03 (MHF® 4) / 20579-001E (MHF® 4L)				
Mated Height		2.9 mm max.	3.0 mm max.	2.5 mm max.	2.0 mm max.	1.7 mm max.	1.4 mm max.	1.2 mm max.	1.2 mm max.
SMT Size		3.1 x 3.0 mm	3.1 x 3.0 mm	3.1 x 3.0 mm	2.0 x 2.0 mm	2.0 x 2.0 mm	2.0 x 2.0 mm	2.0 x 2.0 mm	2.0 x 2.0 mm
Cable Size (Micro-coaxial) (O.D. to AWG)	3.0 mm	-	-	-	-	-	-	-	-
	2.8 mm	-	-	-	-	-	-	-	-
	2.0 mm	-	AWG 26	-	-	-	-	-	-
	1.8 mm	AWG 30	-	AWG 30	-	-	-	-	-
	1.37 mm	AWG 30	-	AWG 30	AWG 30	AWG 30	-	-	-
	1.32 mm	AWG 32	-	AWG 32	-	-	-	-	-
	1.13 mm	AWG 32	-	AWG 32	-	-	AWG 32	-	-
	0.95 mm	-	-	-	-	-	AWG 33	-	-
	0.81 mm	AWG 36	-	AWG 36	-	-	-	AWG 36	AWG 36
	0.64 mm	-	-	-	-	-	-	AWG 36	-
0.48 mm	-	-	-	-	-	-	-	-	
Frequency Range		Up to 9 GHz	Up to 9 GHz	Up to 9 GHz	Up to 12 GHz (MHF® 4L receptacle) Up to 9 GHz (MHF® 4 receptacle)	Up to 12 GHz (MHF® 4L receptacle) Up to 9 GHz (MHF® 4 receptacle)	Up to 12 GHz (MHF® 4L receptacle) Up to 9 GHz (MHF® 4 receptacle)	Up to 12 GHz (MHF® 4L receptacle) Up to 9 GHz (MHF® 4 receptacle)	Up to 9 GHz
VSWR (Harness only)	DC to 3 GHz	1.3 max.	1.3 max.	1.3 max.	1.3 max.	1.3 max.	1.3 max.	1.3 max.	1.3 max.
	3 to 6 GHz	1.5 max.	1.5 max.	1.5 max.	1.4 max.	1.4 max.	1.45 max.	1.45 max.	1.5 max.
	6 to 9 GHz	1.6 max. (O.D.1.32 mm) 1.9 max. (O.D.0.81, 1.13, 1.37, 1.8 mm)	1.6 max.	1.6 max. (O.D.1.32 mm) 1.9 max. (O.D.0.81, 1.13, 1.37, 1.8 mm)	1.5 max.	1.5 max.	1.6 max.	1.6 max.	2.0 max.
	9 to 12 GHz	-	-	-	1.6 max.	1.6 max.	1.9 max.	1.9 max.	-
Operating Temperature		-40 to 90°C (233 to 363 K) *	-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K) *	-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K)

(\*) Please contact us for higher temperature connectors.

# RF Connectors

ZenShield® Full EMI Shield **LK** Mechanical Lock **H** Offered as harness

Click on each product information to jump to the web.

Product Name		MHF® 5L	MHF® 5L	MHF® 5	MHF® 5	MHF® 7S	MHF® -TI
Appearance							
Feature		Improved Insertion Loss and VSWR through 15 GHz	Improved Insertion Loss and VSWR through 15 GHz	Low profile 1.0 mm	Low profile 1.0 mm	Unique shielded design increases EMC performance	Robust SMT connector for automotive telematics antenna
Part Number	Plug	20668-001R-13	20714-001R-81	20711-001R-81	20615-002R-48	20980-001R-13	20859-001R-01
	Receptacle	20566-001E-01	20566-001E-01	20566-001E-01	20566-001E-01	20981-001E-02	20860-001E-01
Mated Height		1.3 mm max.	1.3 mm max.	1.0 mm max.	1.0 mm max.	1.4 mm max.	3.65 mm max.
SMT Size		2.0 x 2.0 mm	2.0 x 2.0 mm	2.0 x 2.0 mm	2.0 x 2.0 mm	2.0 x 2.0 mm	9.4 x 5.18 mm
Cable Size (Micro-coaxial) (O.D. to AWG)	3.0 mm	-	-	-	-	-	AWG 25
	2.8 mm	-	-	-	-	-	AWG 26
	2.0 mm	-	-	-	-	-	-
	1.8 mm	-	-	-	-	-	-
	1.37 mm	-	-	-	-	-	-
	1.32 mm	-	-	-	-	-	-
	1.13 mm	AWG 32	-	-	-	AWG 32	-
	0.95 mm	-	-	-	-	-	-
	0.81 mm	-	AWG 33	AWG 36	-	-	-
0.64 mm	-	-	AWG 36	-	-	-	
0.48 mm	-	-	-	AWG 38	-	-	
Frequency Range		Up to 15 GHz	Up to 15 GHz	Up to 12 GHz	Up to 12 GHz	Up to 15 GHz	Up to 6 GHz
VSWR (Harness only)	DC to 3 GHz	1.3 max.	1.3 max.	1.3 max.	1.3 max.	1.3 max.	1.5 max.
	3 to 6 GHz	1.4 max.	1.4 max.	1.5 max.	1.5 max.	1.35 max.	1.5 max.
	6 to 9 GHz	1.5 max.	1.5 max.	1.6 max.	1.6 max.	1.4 max.	-
	9 to 12 GHz	1.5 max.	1.5 max.	1.8 max. (O.D.0.64 mm) 1.7 max. (O.D.0.81 mm)	1.6 max.	1.45 max.	-
	12 to 15 GHz	1.6 max.	1.6 max.	-	-	1.5 max.	-
Operating Temperature		-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K)	-40 to 90°C (233 to 363 K)	-40 to 105°C (233 to 378 K)
Automotive Standards		-	-	-	-	-	USCAR-2 *




(\* Rev.6 - 5.4.6 (Vibration), 5.6.1 (Thermal Shock), 5.6.2 (Temp. & Humidity Cycle), 5.6.3 (High Temp. Exposure & Life) evaluation passed.

# RF Connectors : Footprint pattern

Product Name	MHF® I LK	MHF® I		MHF® 4L LK	MHF® 4L			MHF® 4	MHF® 5L	MHF® 5	MHF® 7S	MHF® -TI
Appearance												
Mating Height (Max.)	2.9 mm	3.0 mm	2.5 mm	2.0 mm	1.7 mm	1.4 mm	1.2 mm	1.2 mm	1.3 mm	1.0 mm	1.4 mm	3.65 mm
Footprint Pattern (Reference)	<p>3 pads      4 pads MHF® I Rece.</p>			<p>MHF® 4/4L Rece.</p>			<p>MHF® 5/5L Rece.</p>			<p>MHF® 7S Rece.</p>		<p>MHF® -TI Rece.</p>
	<p>No ground, signal, resist in this area</p>											

# RF Accessories : SMA Adapters










## SMA Adapters for MHF® Plugs

Type	For electrical performance check		For voltage check
Appearance (Reference)			
Durability (cycles)	3,000		10,000
MHF® I, I LK Plug	90193-001	-	90194-001
MHF® 4, 4L, 4L LK Plug	-	90449-001	90449-003-01
MHF® 5, 5L Plug	90543-0001	-	90586-0002
MHF® 7S Plug	-	91255-0001	91245-0001

## SMA Adapters for MHF® Receptacles

Type	For electrical performance check	High cycle series				
		Normal	Narrow pitch		Detachable	
		Probe	Adapters cable (Attach to probe)	Probe	Adapters base (Attach to probe)	Probe
Appearance (Reference)						
Durability (cycles)	500	10,000	100	10,000	200,000	10,000
MHF® I Receptacle	90193-002	90539-001	90577-0100 (Cable: 100 mm)	90575-0001	90684-0001	90416-001
MHF® 4, 4L Receptacle	90449-002	90698-0001	90577-0200 (Cable: 200 mm)	90576-0001		90683-0001
MHF® 5, 5L Receptacle	90543-0002	90793-0001	90577-0350 (Cable: 350 mm) 90577-0750 (Cable: 750 mm)	90847-0001		90690-0001
MHF® 7S Receptacle	91256-0001	-	91197-300P 91197-300J	91136-0001 91145-0001	-	-

# RF Accessories : Hand Tool

Type	Insertion/ Extraction tool	Extraction tool	Insertion tool	Insertion/ Extraction tweezer	Unlocking, Extraction tweezer	Locking/Unlocking, Extraction tweezer	Locking/Unlocking, Insertion/ Extraction tweezer		Unlocking tool
Appearance (Reference)									
MHF® I Plug	90224-001 90885-0001 (*1)	90192-001	-	-	-	-	-	-	-
MHF® I LK Plug	-	-	-	-	91026-0001	91492-0001	-	-	-
MHF® 4 Plug	90435-001	-	-	90482-001	-	-	-	-	-
MHF® 4L Plug	90609-0001 (*2) 90873-0001 (*3)	-	-	90616-0008 90615-0013	-	-	-	-	-
MHF® 4L LK Plug	-	-	-	-	-	-	91166-0001	91493-0001	-
MHF® 5, 5L Plug	90612-0001	-	90624-0001	-	-	-	-	-	-
MHF® 7S Plug	91186-0001	-	-	-	-	-	-	-	-
MHF® -TI Plug	-	-	-	-	-	-	-	-	91097-0001

Note

(\*1): 90885-0001 is for 20767-001R

(\*2): 90609-0001 is for 20572-001R-08 and 20565-001R-13

(\*3): 90873-0001 is for 20632-001R-37

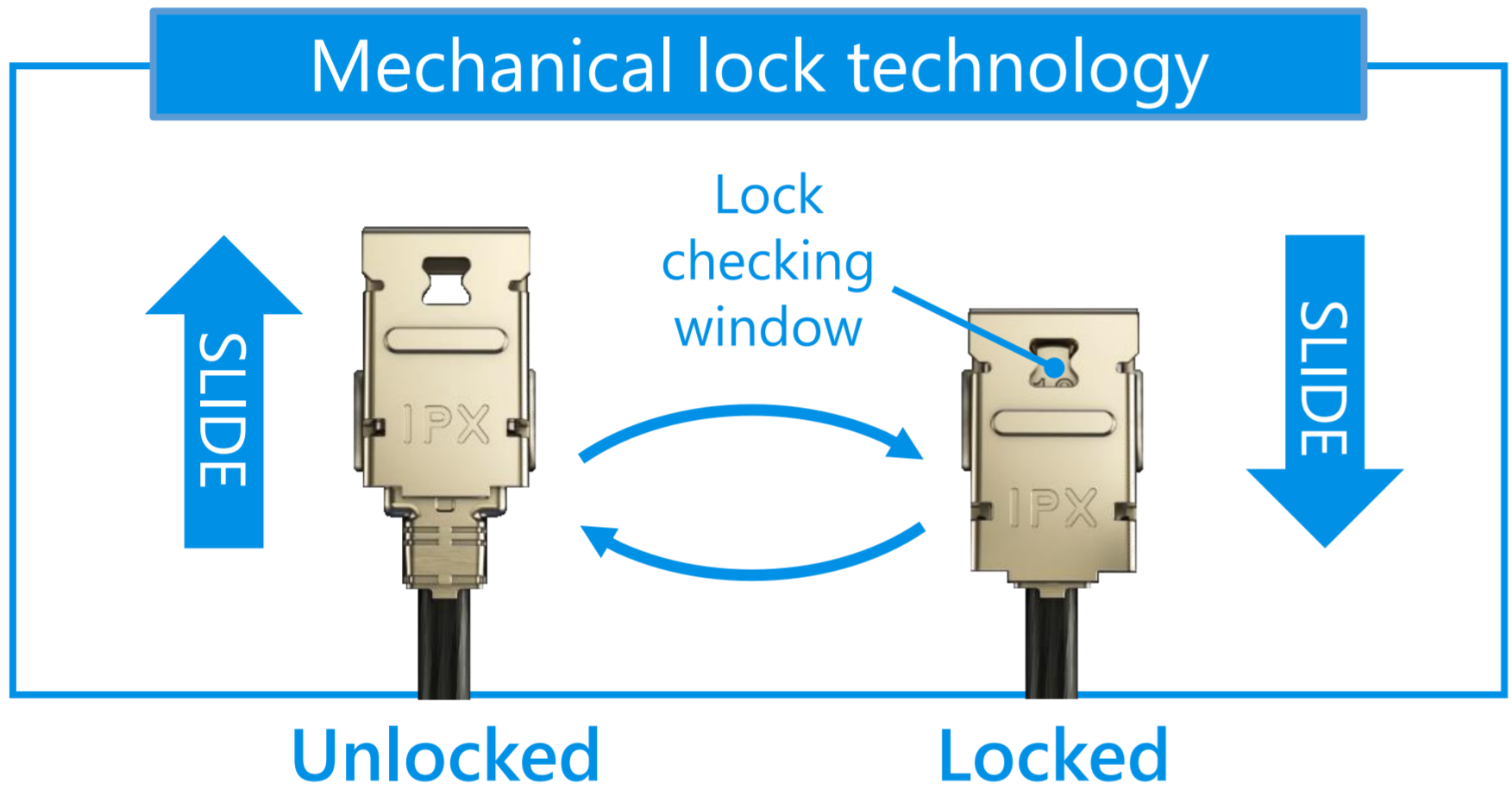


# MHF<sup>®</sup> Series

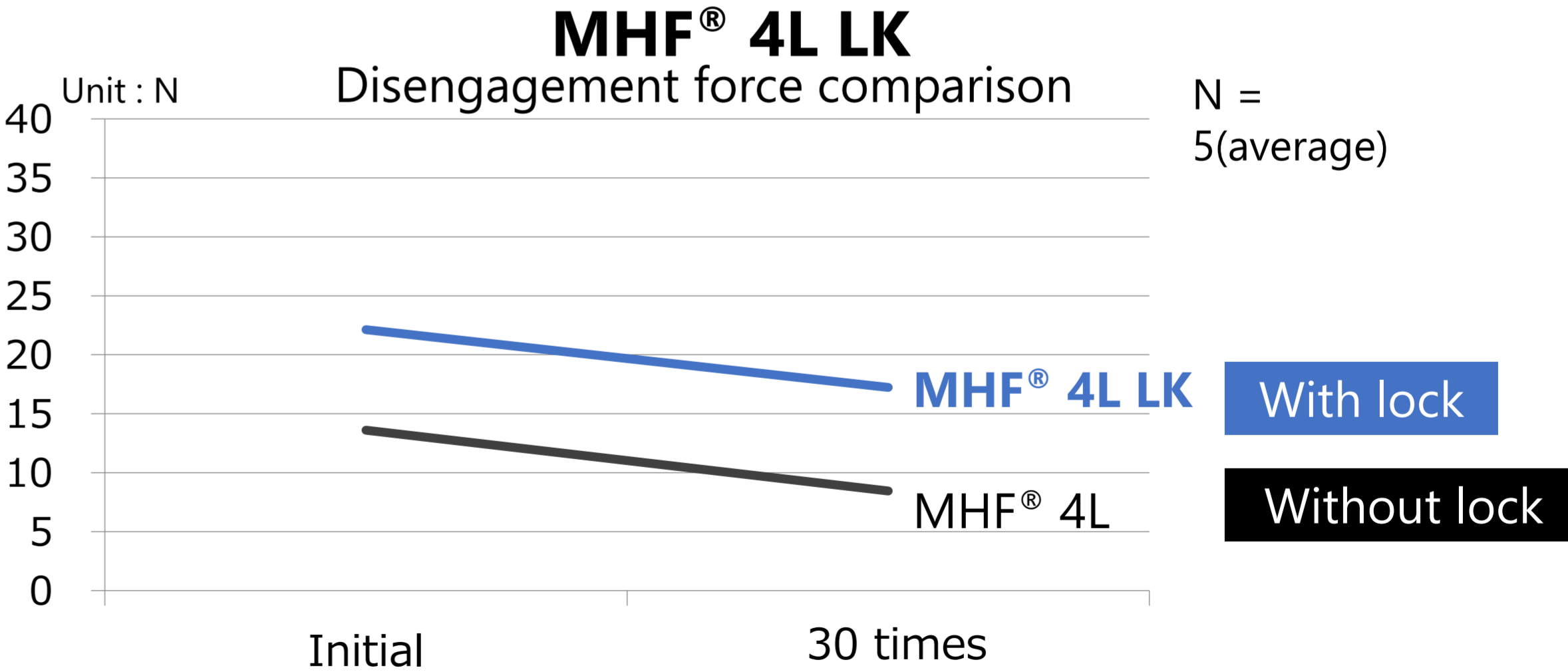
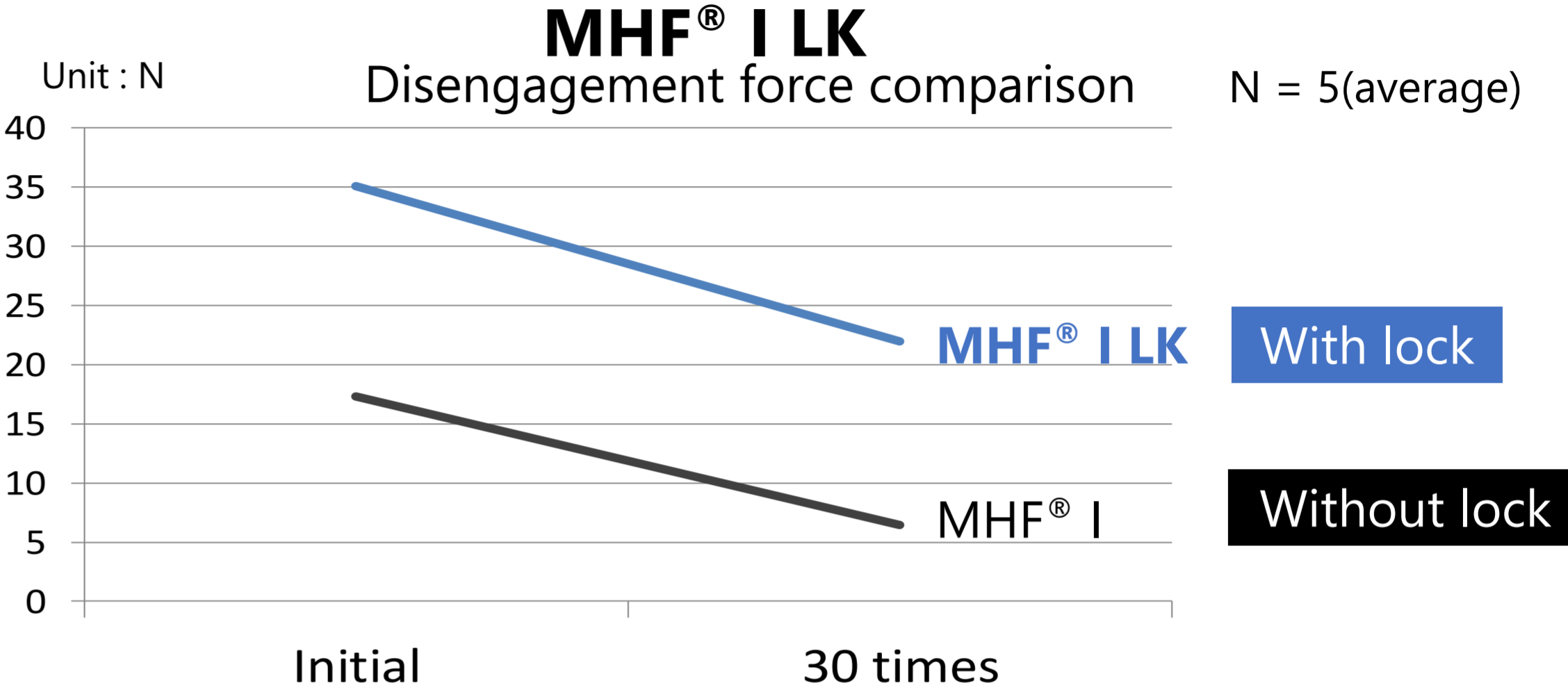
## Mechanical lock

# MHF® I LK/MHF® 4L LK : Ideal for continuous shock and vibration applications

## Locking/Un-Locking Process



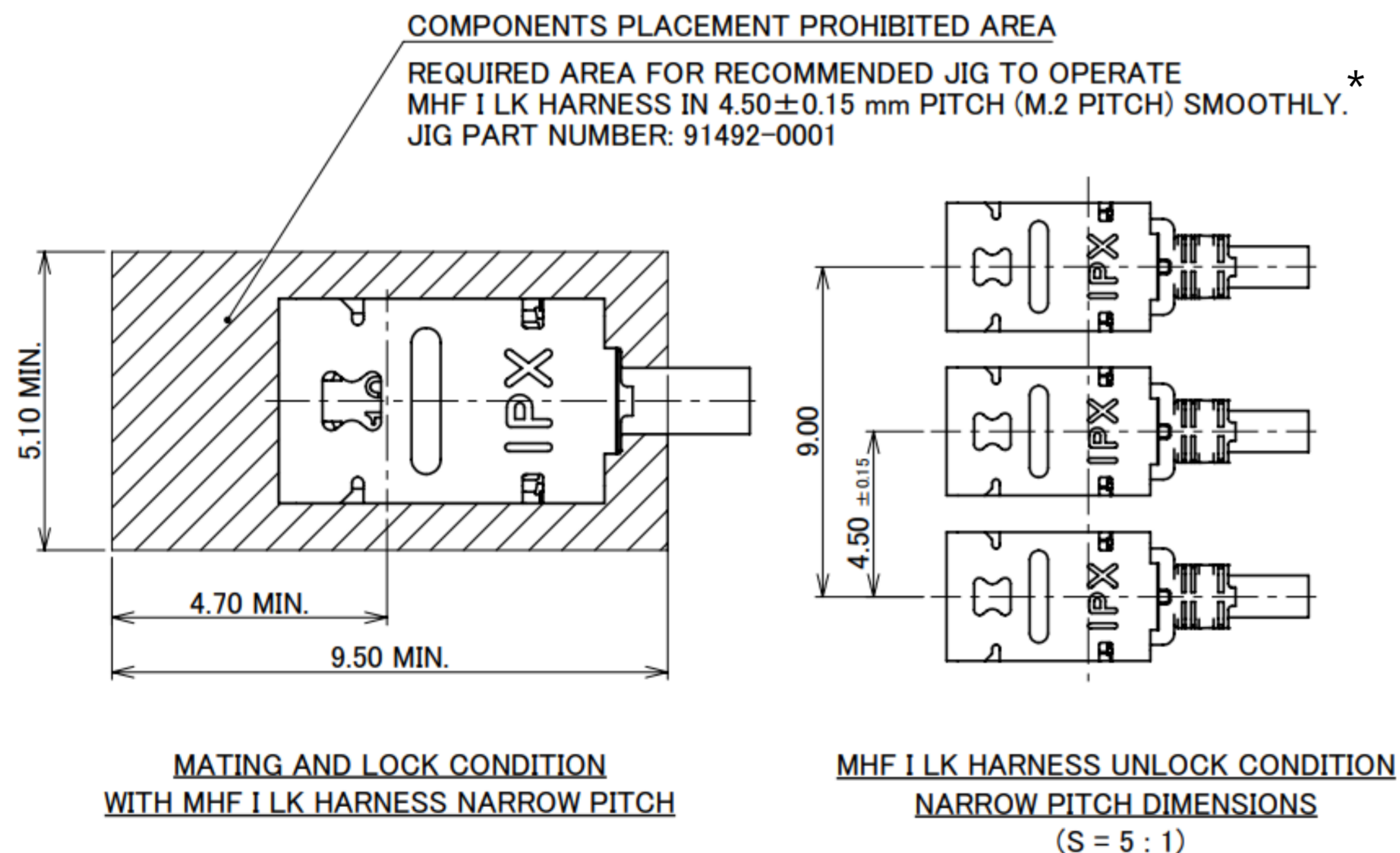
Play full [MHF® I LK](#) video



# MHF<sup>®</sup> I LK/MHF<sup>®</sup> 4L LK : Component placement prohibited area

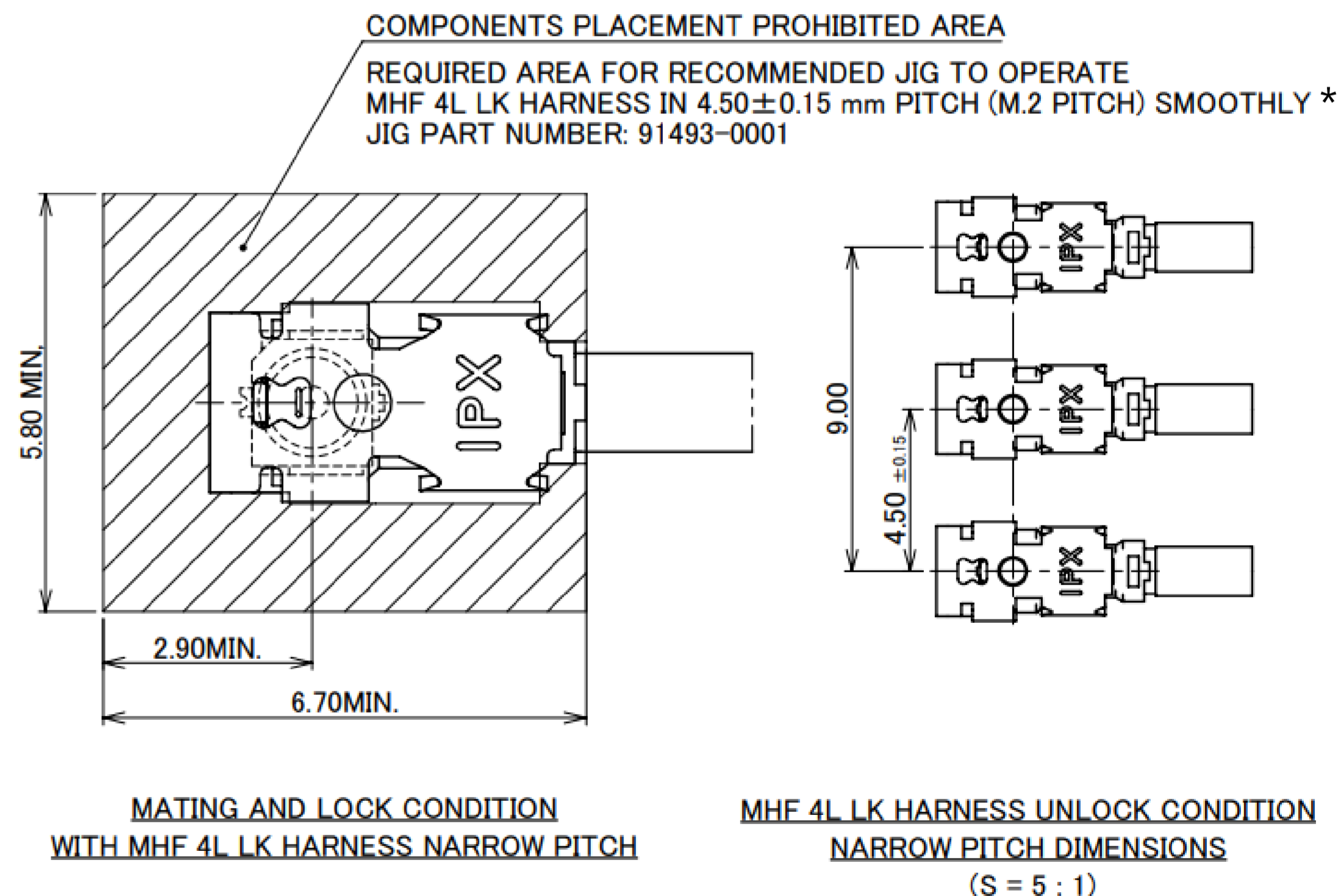
## MHF I Receptacle mated with MHF<sup>®</sup> I LK harness

### MULTIPLE CONNECTORS LAYOUT



## MHF 4L Receptacle mated with MHF<sup>®</sup> 4L LK harness

### MULTIPLE CONNECTORS LAYOUT




\*4.5 mm pitch is M.2 standard compatible. The clearance for the connector layout is not M.2 standard compatible.

# MHF<sup>®</sup>-TI : Small, robust RF connector for automotive

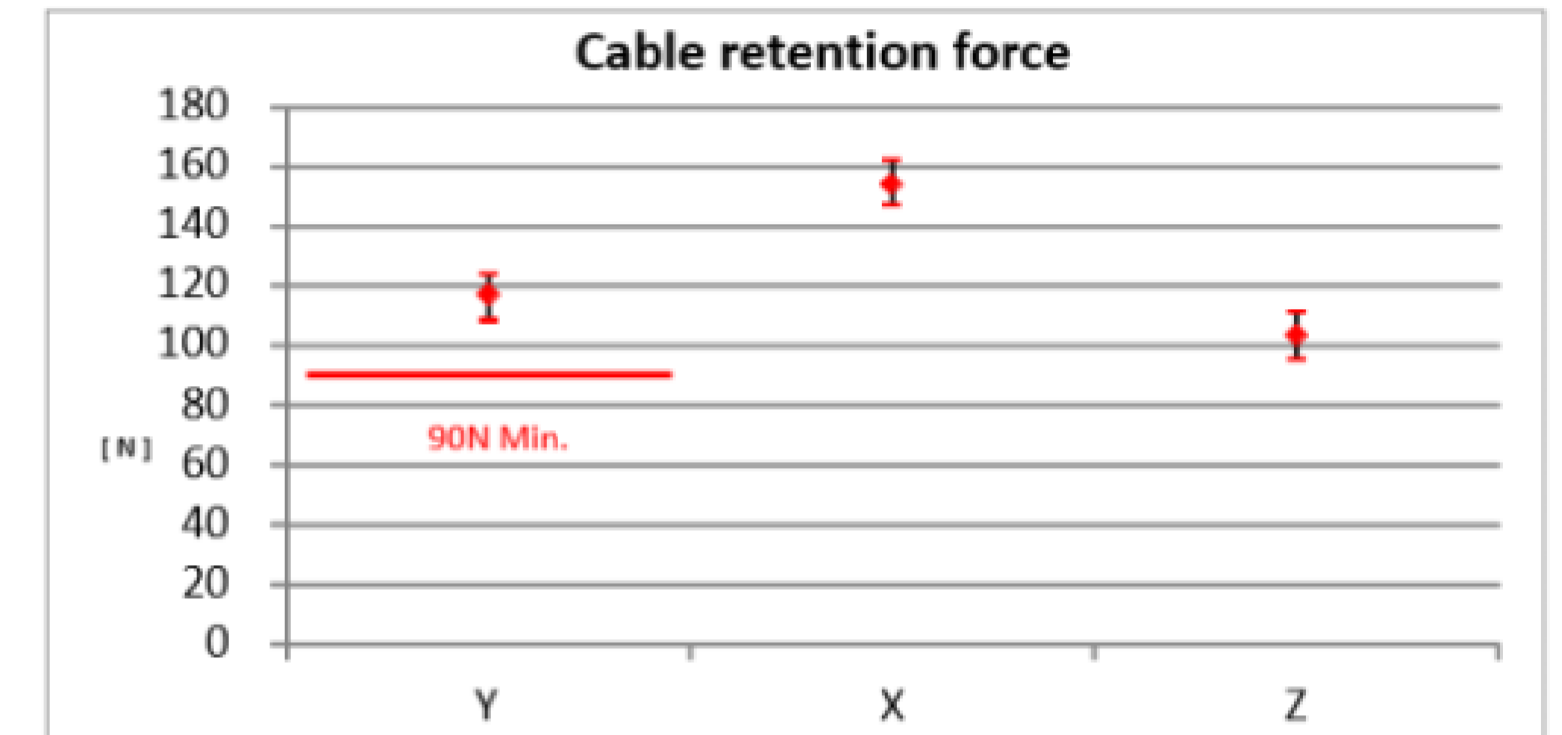
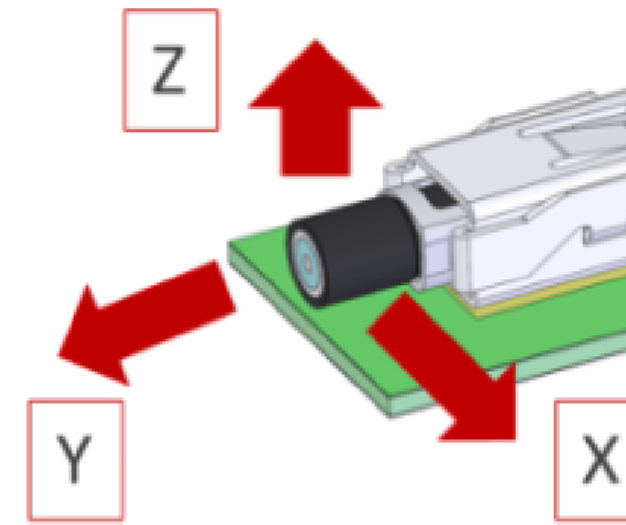
Click on the product information to jump to the web.

**H** Offered as harness

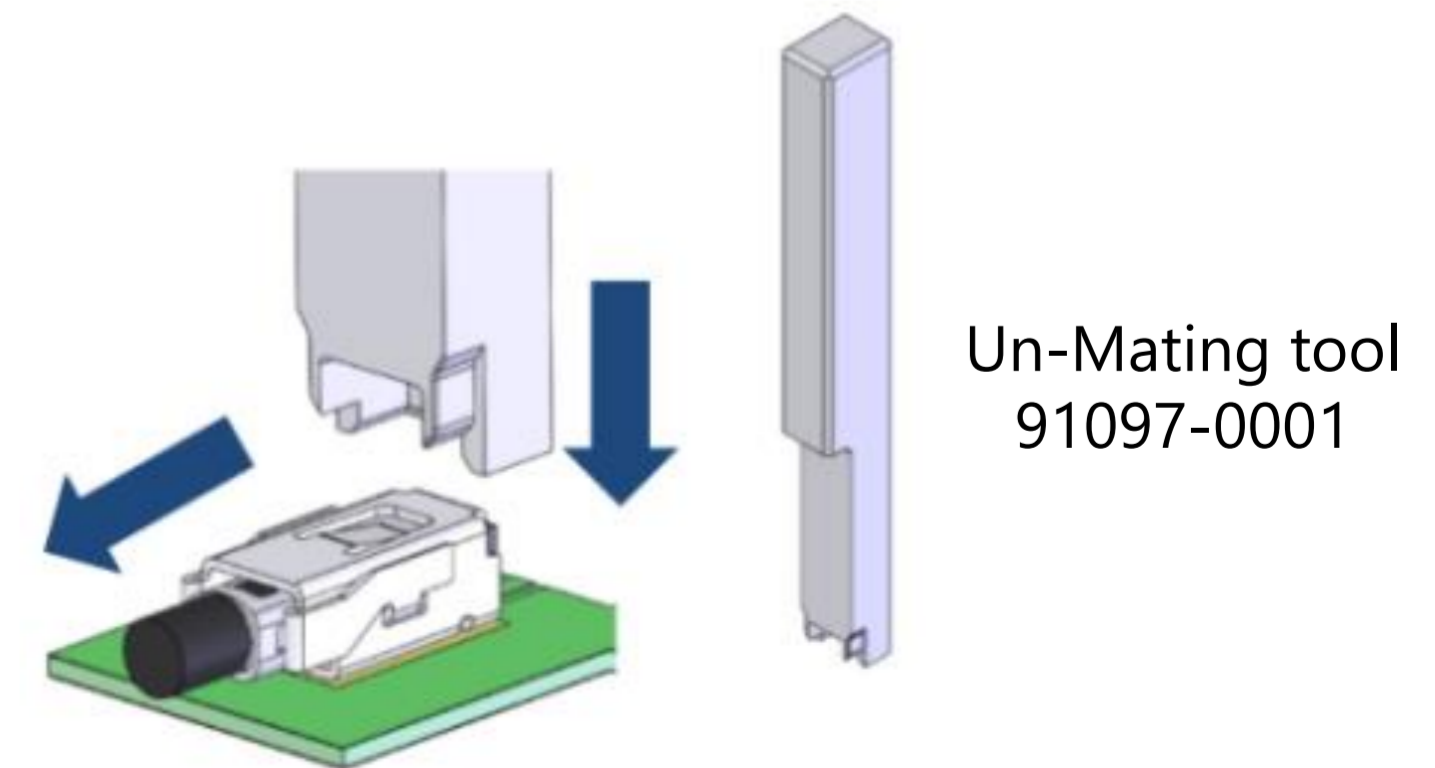
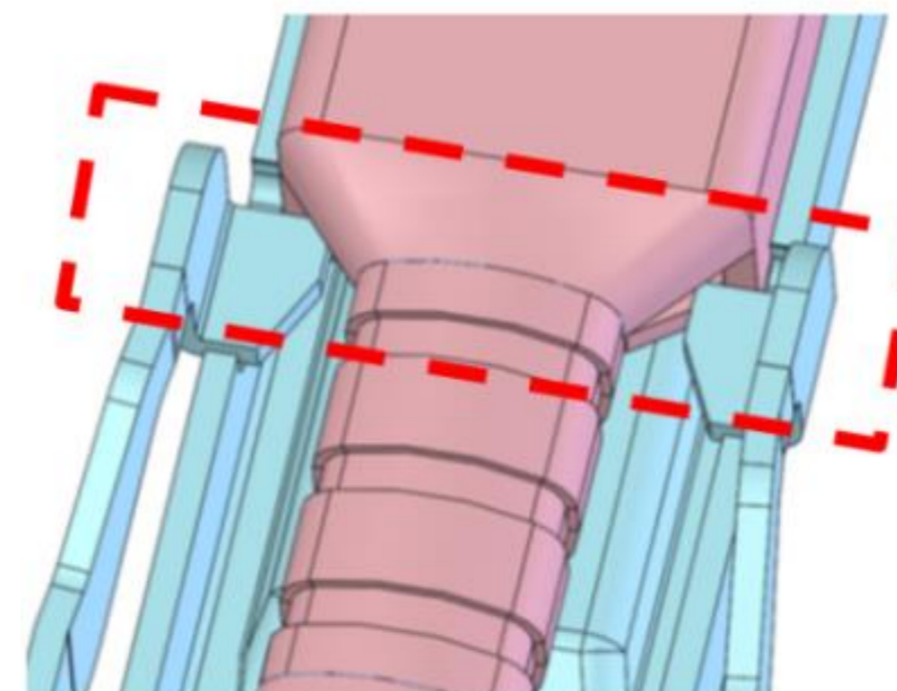
Product Name		MHF <sup>®</sup> -TI
Appearance		 <b>H</b>
Feature		Robust SMT connector for automotive telematics antenna
Part Number	Plug	20859-001R-01
	Receptacle	20860-001E-01
Mated Height		3.65 mm max.
SMT Size		9.4 x 5.18 mm
Cable Size (Micro-coaxial) (O.D. to AWG)	3.0 mm	AWG 25
	2.8 mm	AWG 26
Frequency Range		Up to 6 GHz
VSWR (Harness only)	DC to 6 GHz	1.5 max.
Operating Temperature		-40 to 105°C (233 to 378 K)
Automotive Standards		USCAR-2 *

(\*) Rev.6 - 5.4.6 (Vibration), 5.6.1 (Thermal Shock), 5.6.2 (Temp. & Humidity Cycle), 5.6.3 (High Temp. Exposure & Life) evaluation passed.

## ■ High retention force (90N minimum)



## ■ Permanent mechanical lock with tactile indication of secure contact




# MHF<sup>®</sup>-SW Series




RF Switch

# RF Switch: MHF®-SW23 & Accessories

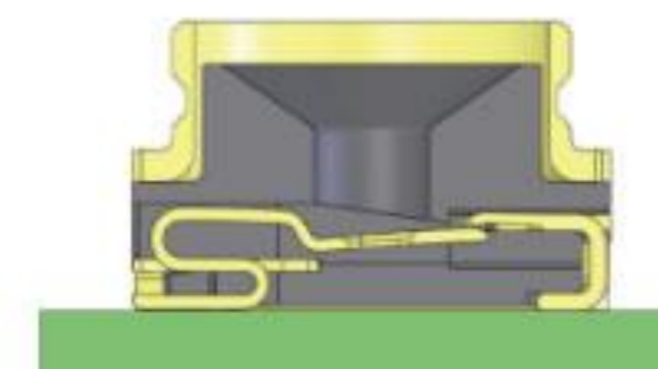
Click on the product information to jump to the web.

Product Name		MHF®-SW23
Appearance		
Feature		Contaminant discontinuity resistant design 2.3 x 2.3 mm footprint
Part Number		20549-001E
Dimensions (W x D)		2.3 x 2.3 x 1.35 mm
Rated Power		2W max.
Frequency Range		Up to 11 GHz
VSWR	DC to 2.5 GHz	1.2 max.
	2.5 to 6 GHz	1.3 max.
	6 to 11 GHz	1.5 max.
Insertion Loss	DC to 2.5 GHz	0.15 dB max.
	2.5 to 6 GHz	0.2 dB max.
	6 to 11 GHz	0.4 dB max.
Isolation	DC to 3 GHz	20.0 dB min.
	3 to 6 GHz	15.0 dB min.
	6 to 11 GHz	12.0 dB min.
Operating Temperature		-40 to 85°C (233 to 358 K)

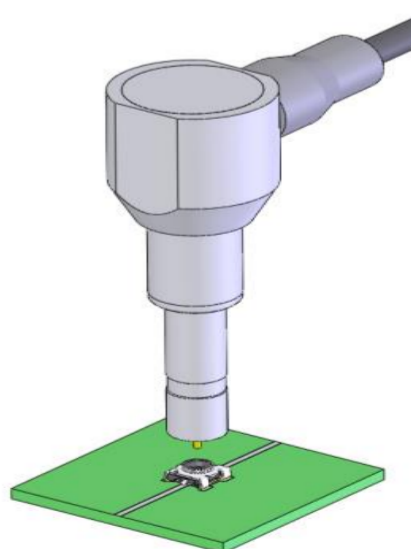
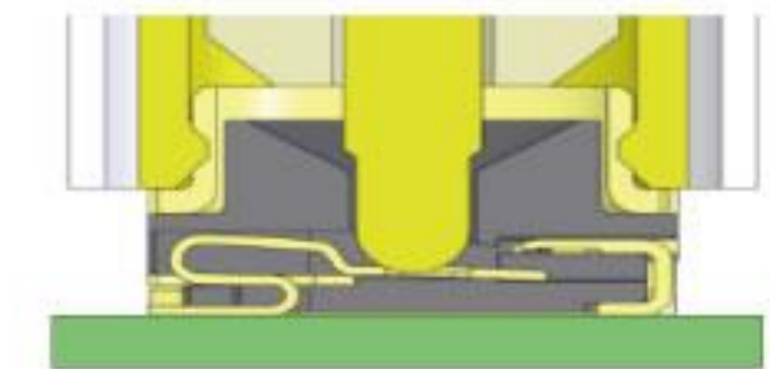
## SMA Adapters for MHF® Switch

Type	Cable probe	High cycle series	
	Friction lock	Normal probe	Floating probe
Appearance (Reference)			
Durability (cycles)	1,000	10,000	200,000
MHF®-SW23	90582-0300 (Cable: 300 mm)  90582-0400 (Cable: 400 mm)	90604-0001	90605-0001

On State




Off State

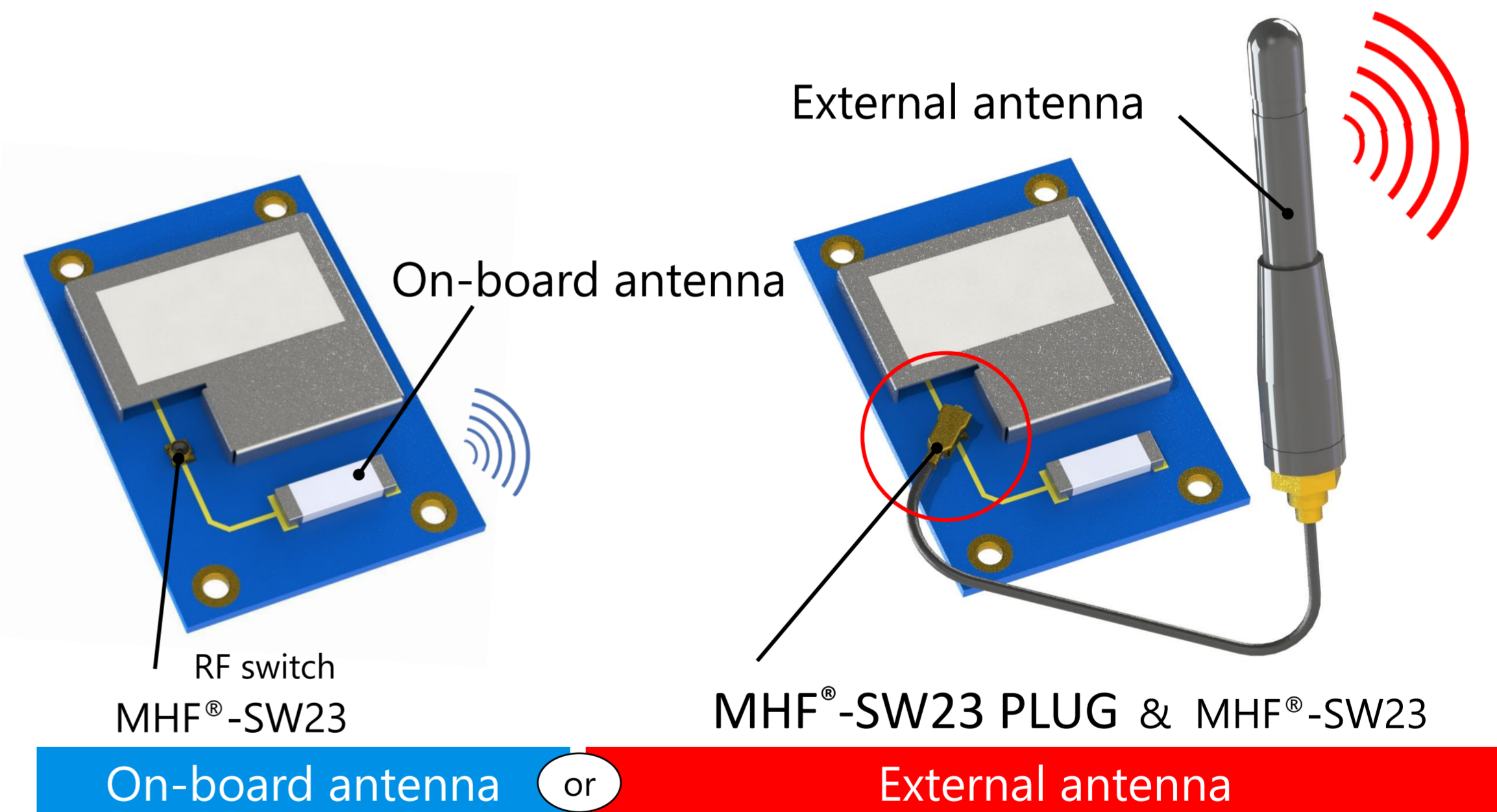


# RF Connector for RF switch : MHF<sup>®</sup>-SW23 plug

Click on the product information to jump to the web. H Offered as harness

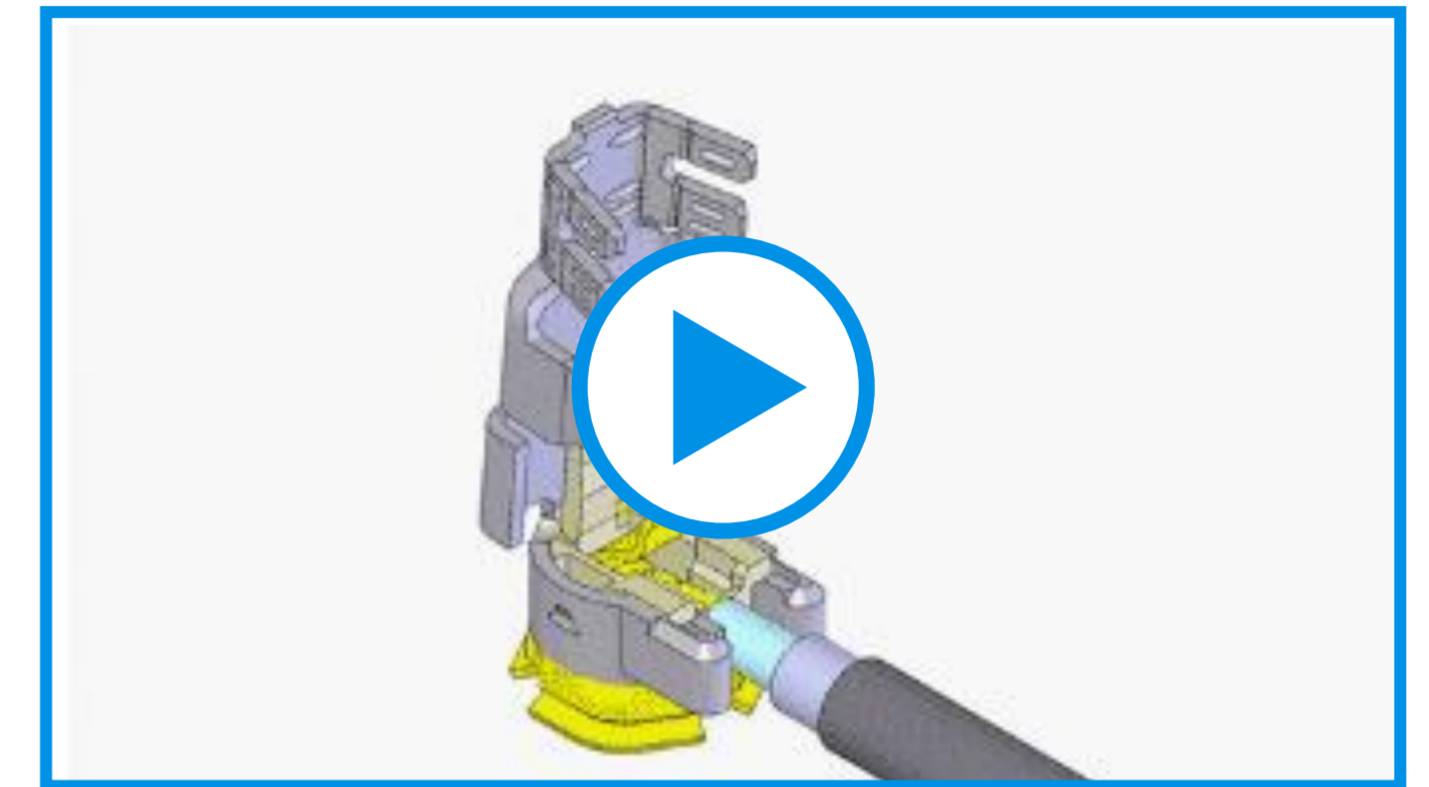
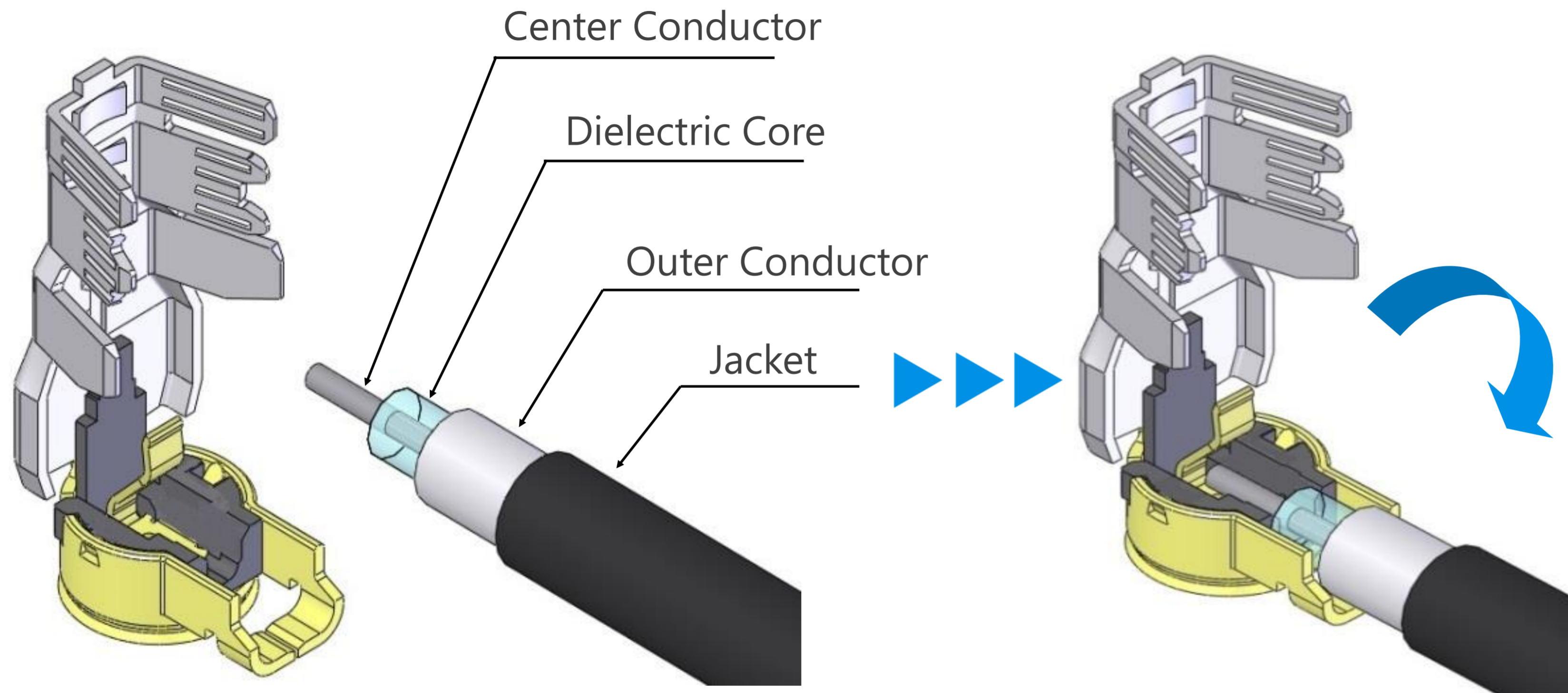
Product Name		MHF <sup>®</sup> -SW23 Plug
Appearance		 <span>H</span>
Feature		Mating with switch connector
Part Number	Plug	20851-001R
	Switch Connector	20549-001E (MHF <sup>®</sup> -SW23)
Mated Height		3.7 mm max.
SMT Size		2.3 x 2.3 mm
Cable Size (Micro-coaxial) (O.D. to AWG)	1.13 mm	AWG 32
Frequency Range		Up to 9 GHz
VSWR (Harness only)	0.3 to 3 GHz	1.4 max.
	3 to 6 GHz	1.6 max.
	6 to 9 GHz	2.0 max.
Rated Power		2 W max.
Operating Temperature		-40 to 85°C (233 to 358 K)

Flexibility to choose on-board antenna or external antenna



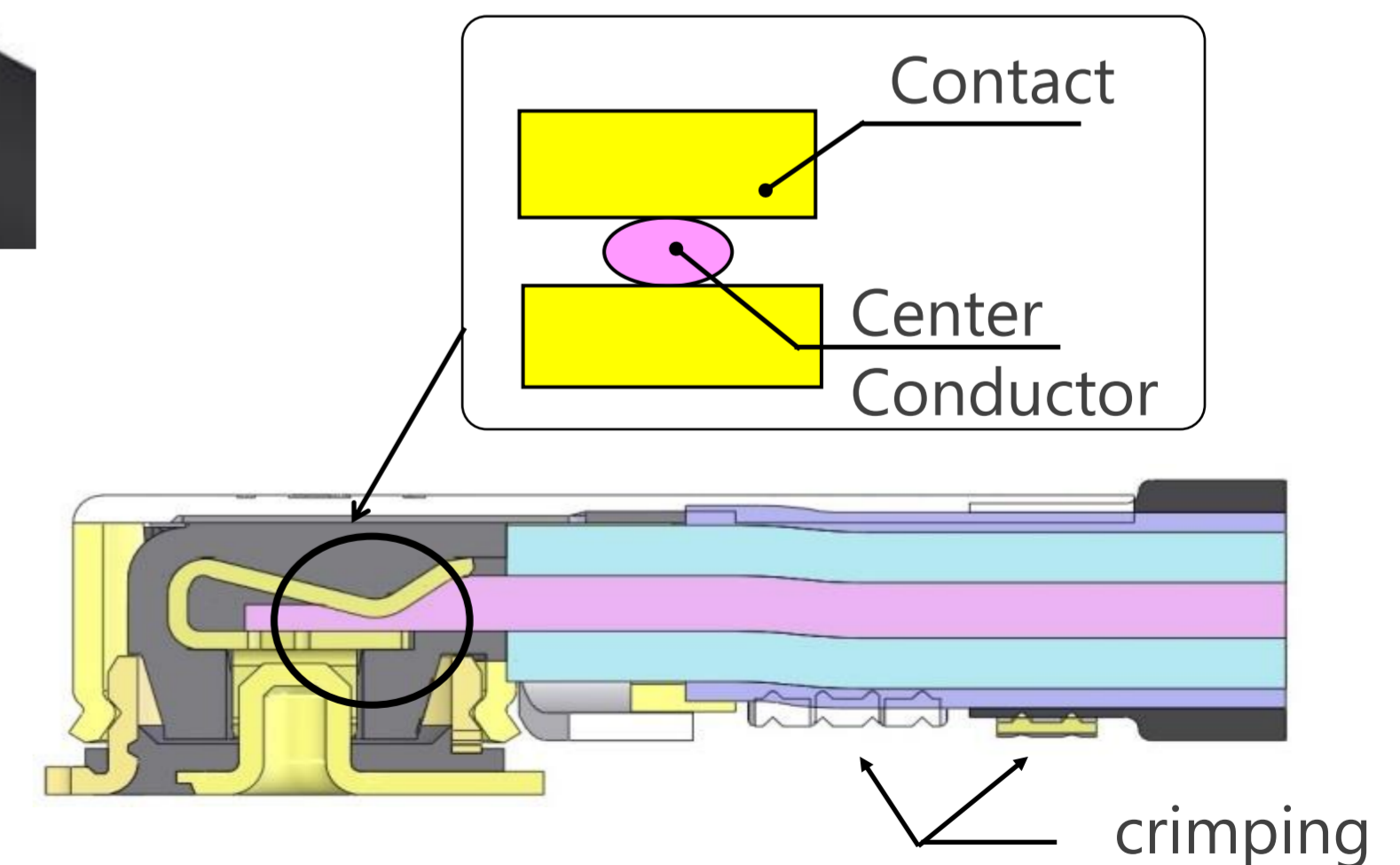
# MHF<sup>®</sup> Harnesses

# i-Fit<sup>®</sup> Technology: Solderless Wire Crimp Terminating Technology



Play full [i-Fit<sup>®</sup> technology](#) video

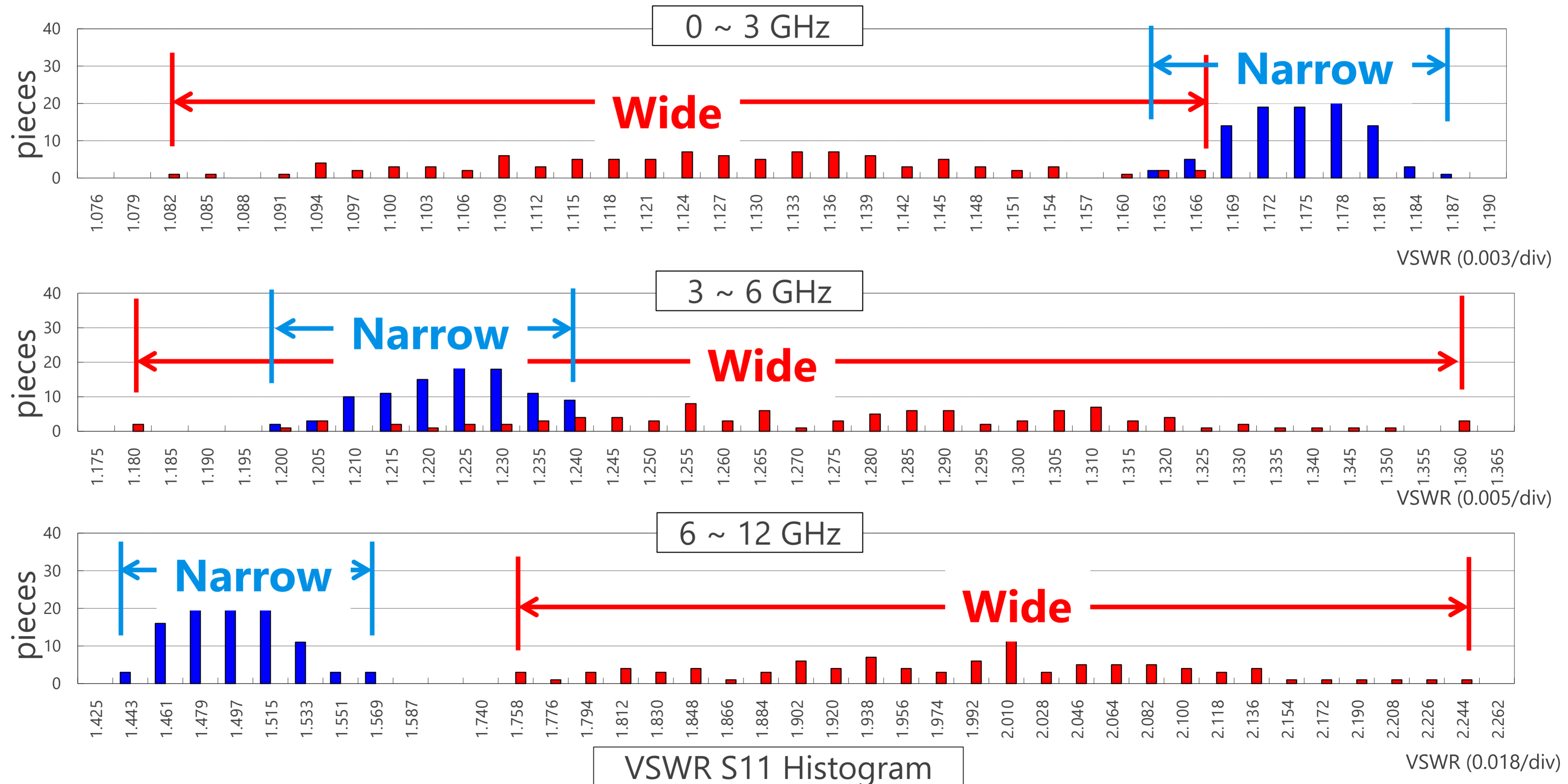
I-PEX's [i-Fit<sup>®</sup> solderless terminating technology](#) is the core of the MHF<sup>®</sup> connector series. Simple and scalable, i-Fit<sup>®</sup> enables MHF<sup>®</sup> harnesses to have consistent performance values within a tight range.



# i-Fit<sup>®</sup> Technology: Solder-less crimp advantage versus soldering types

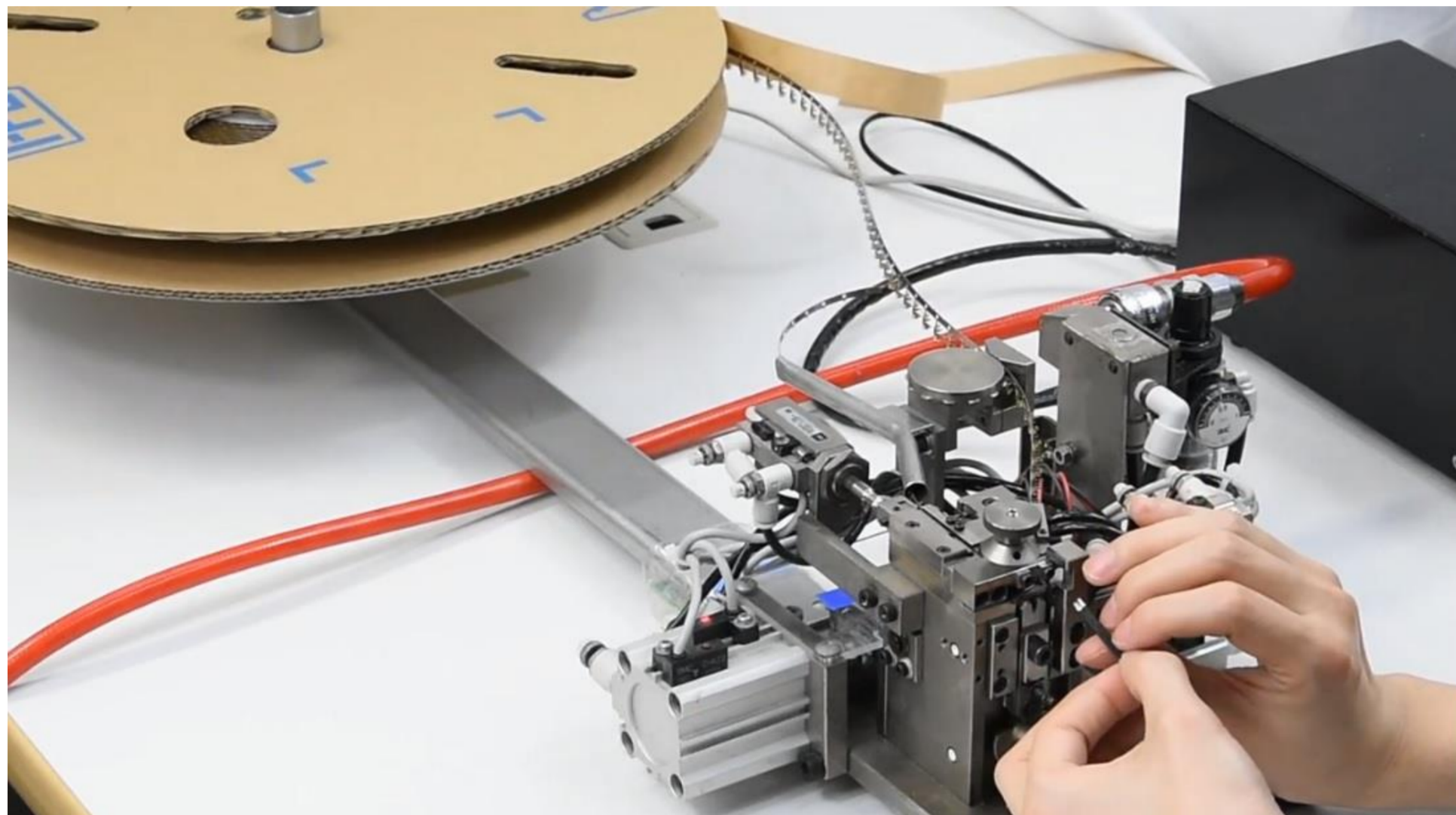
i-Fit<sup>®</sup> offers consistently tight range of performance

■ I-PEX i-Fit<sup>®</sup> solderless termination (MHF<sup>®</sup> 5)  
■ Solder termination



# i-Fit<sup>®</sup> Technology: Solder-less crimp advantage versus manual soldering types

## ■ i-Fit<sup>®</sup> Semi-Auto Wiring Jig



### Significantly reduced tact time with i-Fit<sup>®</sup>

		I-PEX MHF <sup>®</sup> "i-Fit <sup>®</sup> "	Manual Soldering
Tact time	Cable strip	Same tact time	
	Termination	<b>6</b> seconds/ea.	<b>30</b> seconds/ea.
Qty of cable assemblies a worker can make per month		105,600 assemblies	21,120 assemblies
Number of operator needed	1M cable assemblies/month	10	48
	2M cable assemblies/month	19	95

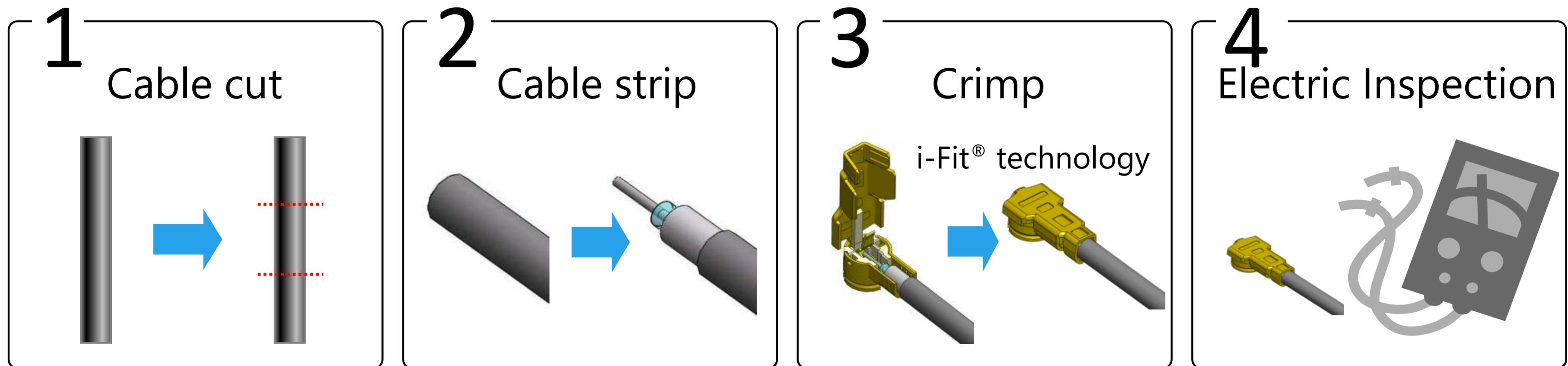
\*Calculated based on operation hours of 22days/month (8hours/day)

I-PEX's i-Fit<sup>®</sup> technology has enabled antenna and harness makers to have the ability to terminate MHF<sup>®</sup> products in local production facilities. With over 1,000 [termination machines](#) in the field, more than 100 customers produce MHF<sup>®</sup> harnesses and antennas ensuring quality when using genuine MHF<sup>®</sup> components.




# MHF<sup>®</sup> Harness Assemblies : Available for supply as a harness assemblies

I-PEX provides harness assemblies made with Fully Automated Machines and i-Fit<sup>®</sup> technology

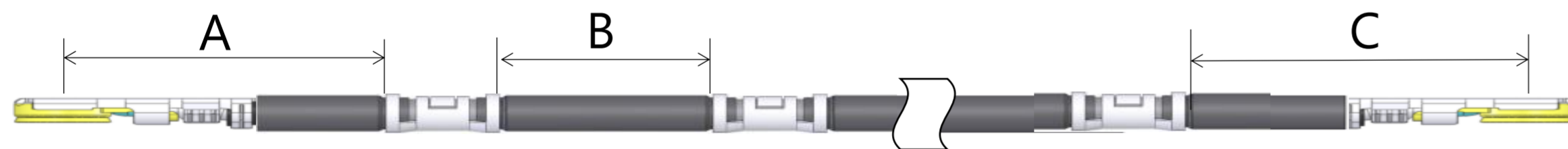
## Fully Automated Process



# MHF<sup>®</sup> Harness Assemblies : Cable clamp and surface mount clip

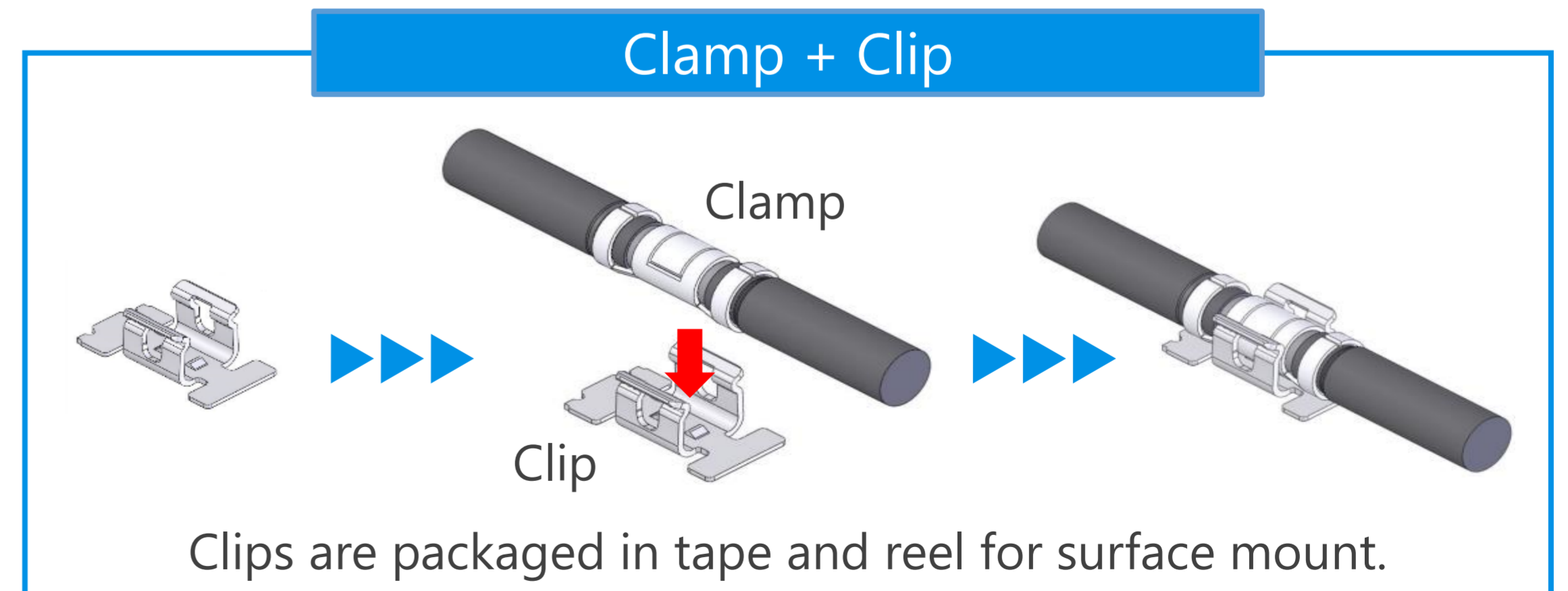
		Grounding clamp 3 mm length	Grounding clamp 6 mm length	Clip for grounding clamp MP-A series
Appearance (Reference)				
Coax O.D. (Center Conductor AWG)	1.37 mm (30)	●	●	● MP-A04 (P/N 3224-0001)
	1.13 mm (32)	●	●	● MP-A02 (P/N 3182-0001)
	0.81 mm (36)	●	●	● MP-A01 (P/N 3096-0001)
	0.64 mm (36)	●	●	● MP-A03 (P/N 3186-0001)

## Minimum distance between clamps

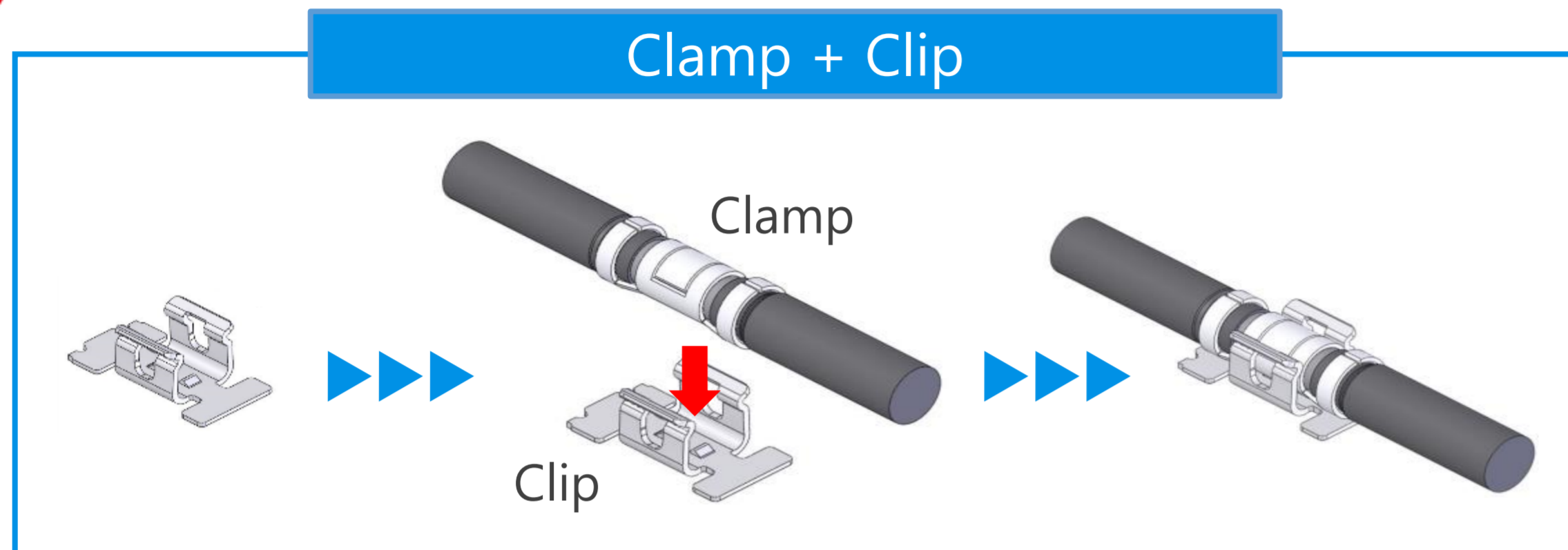


A	B	C
7 mm min.	10 mm min.	20 mm min.

\*Depending on the harness specifications, this condition may not apply. Please contact our sales for details.



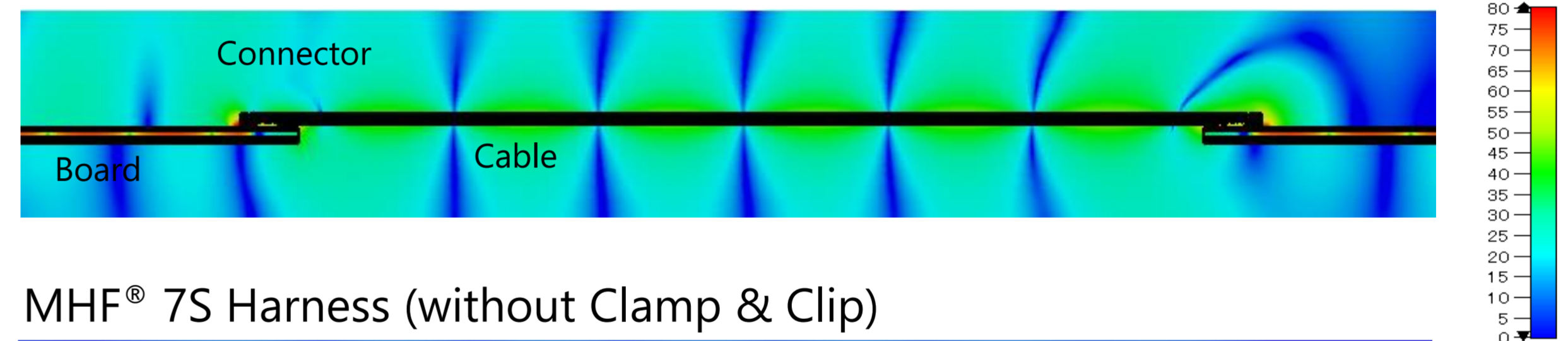
# MHF<sup>®</sup> Harness Assemblies : Cable clamp and surface mount clip



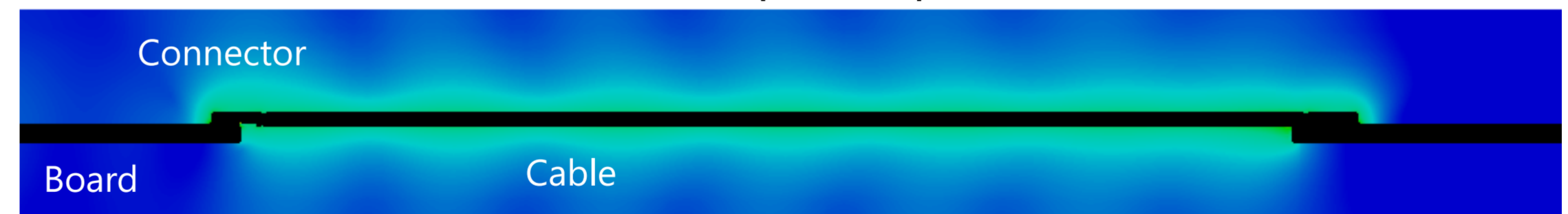
Provides EMI improvements for dense RF applications **Ideal for 5G mmWave applications**

## Electric Field Simulations

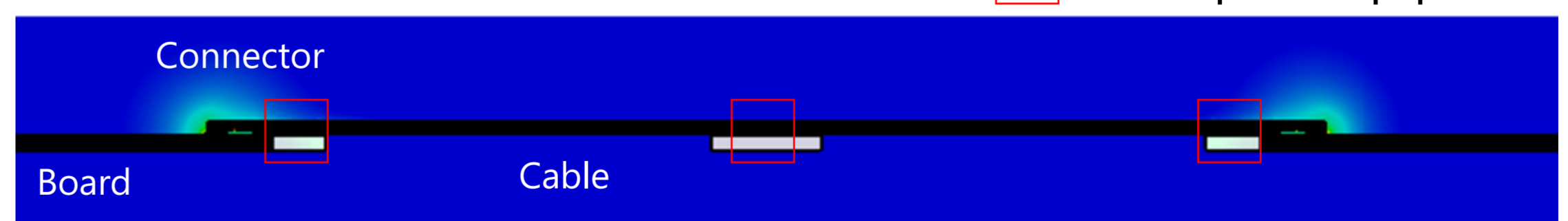
MHF<sup>®</sup> 4L Harness (without Clamp & Clip)



MHF<sup>®</sup> 7S Harness (without Clamp & Clip)

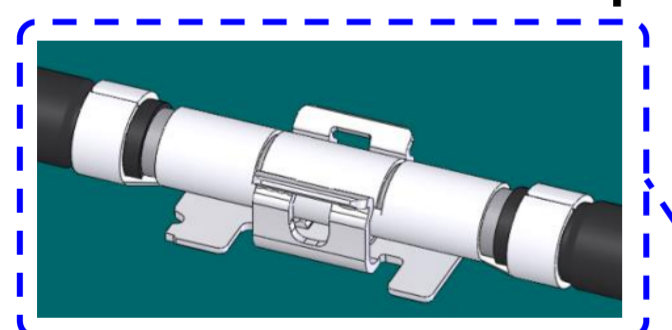


MHF<sup>®</sup> 7S Harness with Clamp & Clip   : Clamp & Clip points

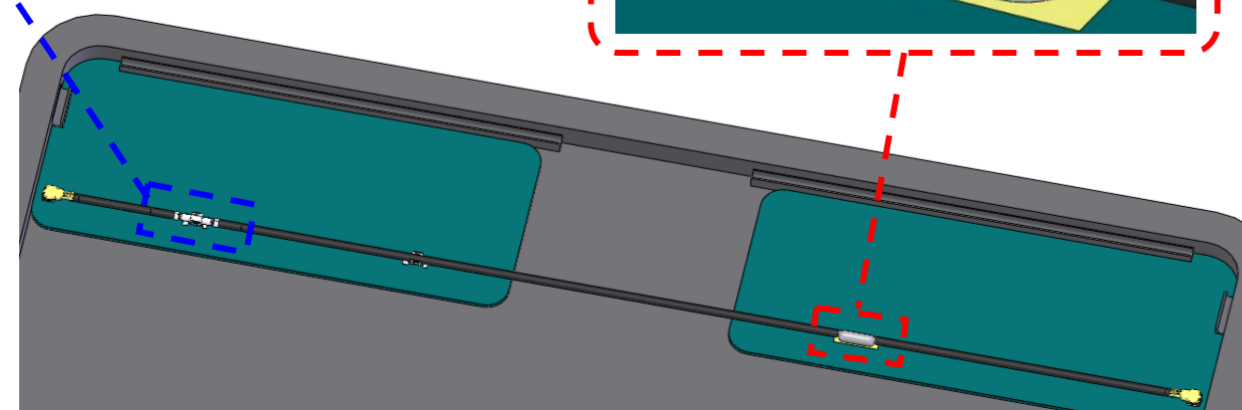
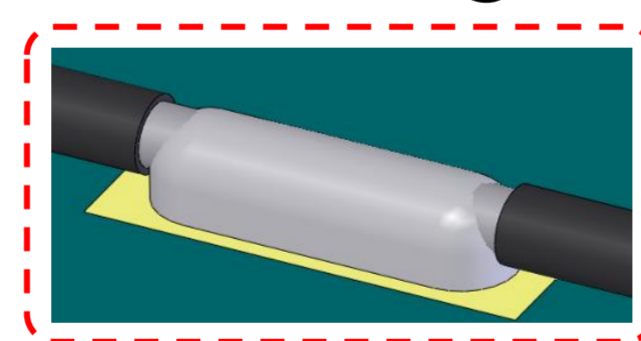


Reduces tact time for assembly and rework

MP-A & Clamp

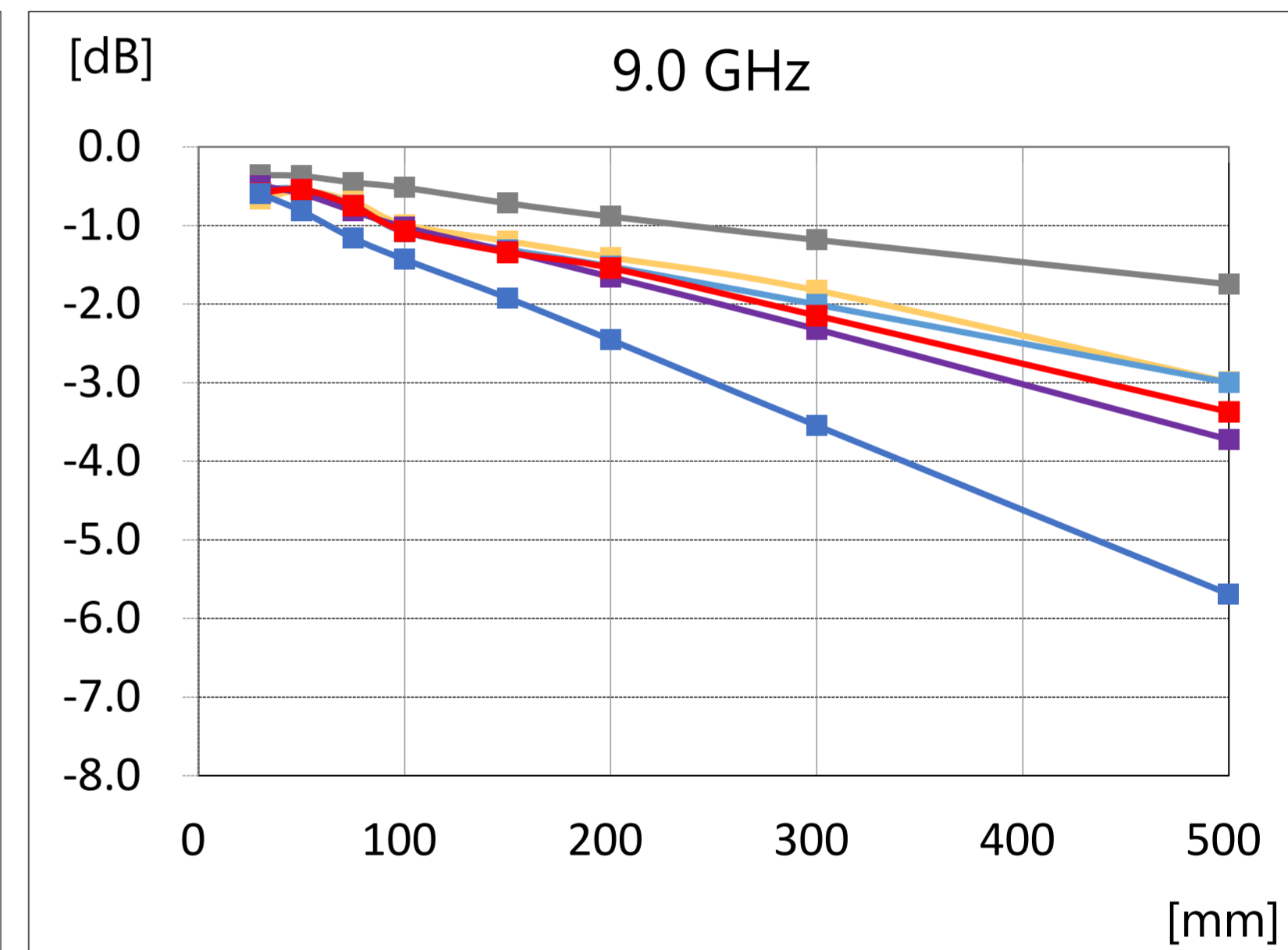
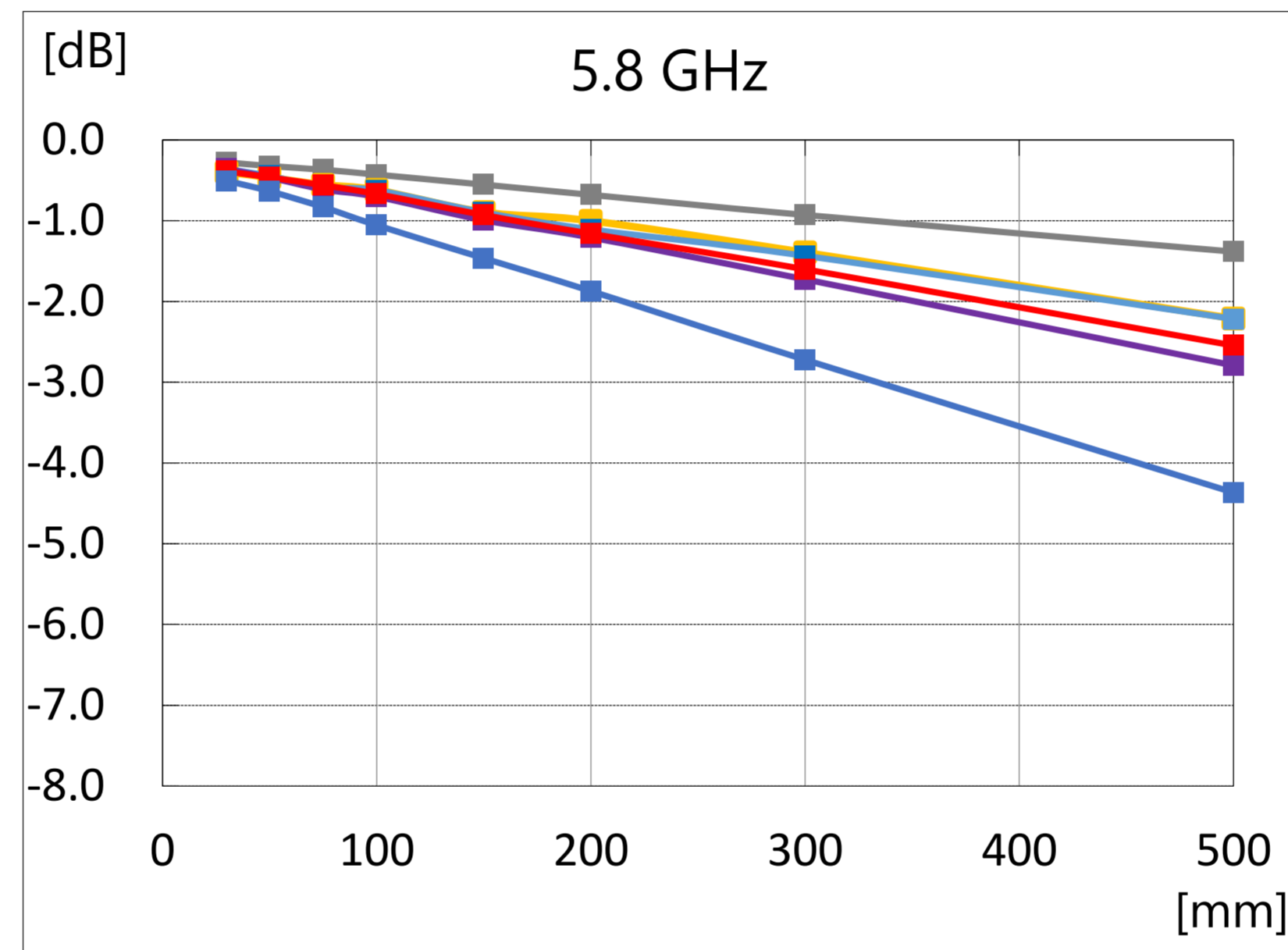
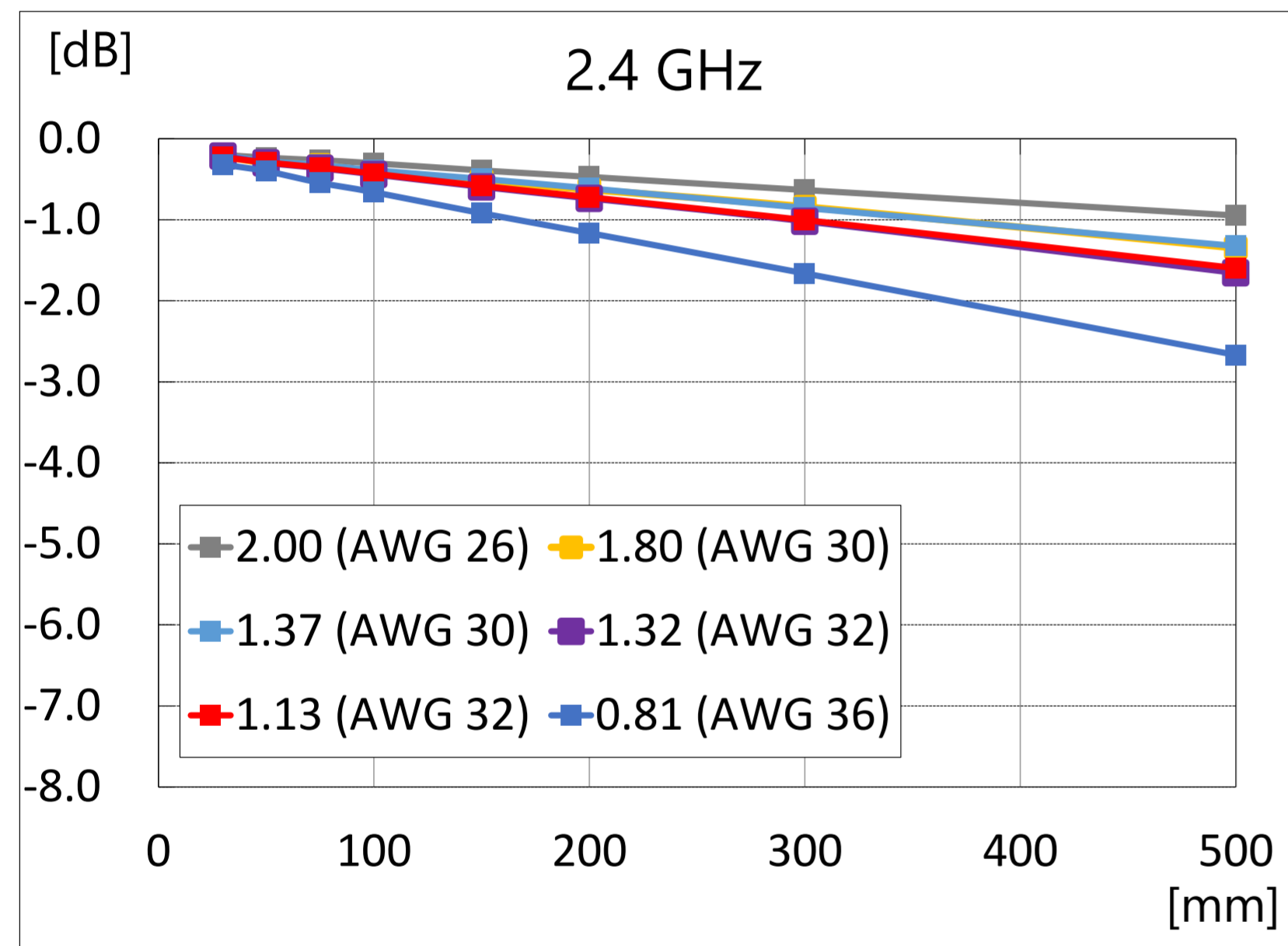


Soldering



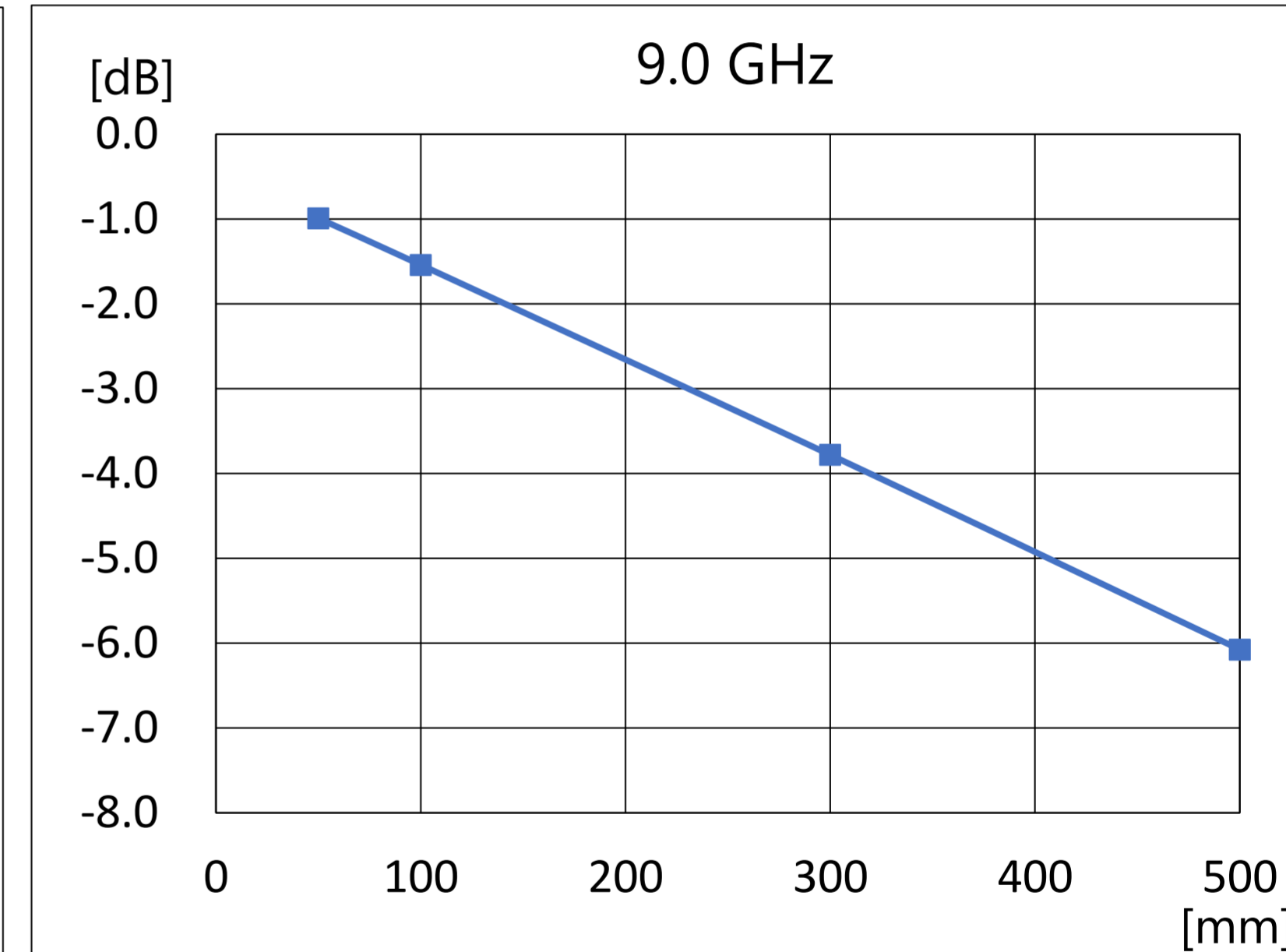
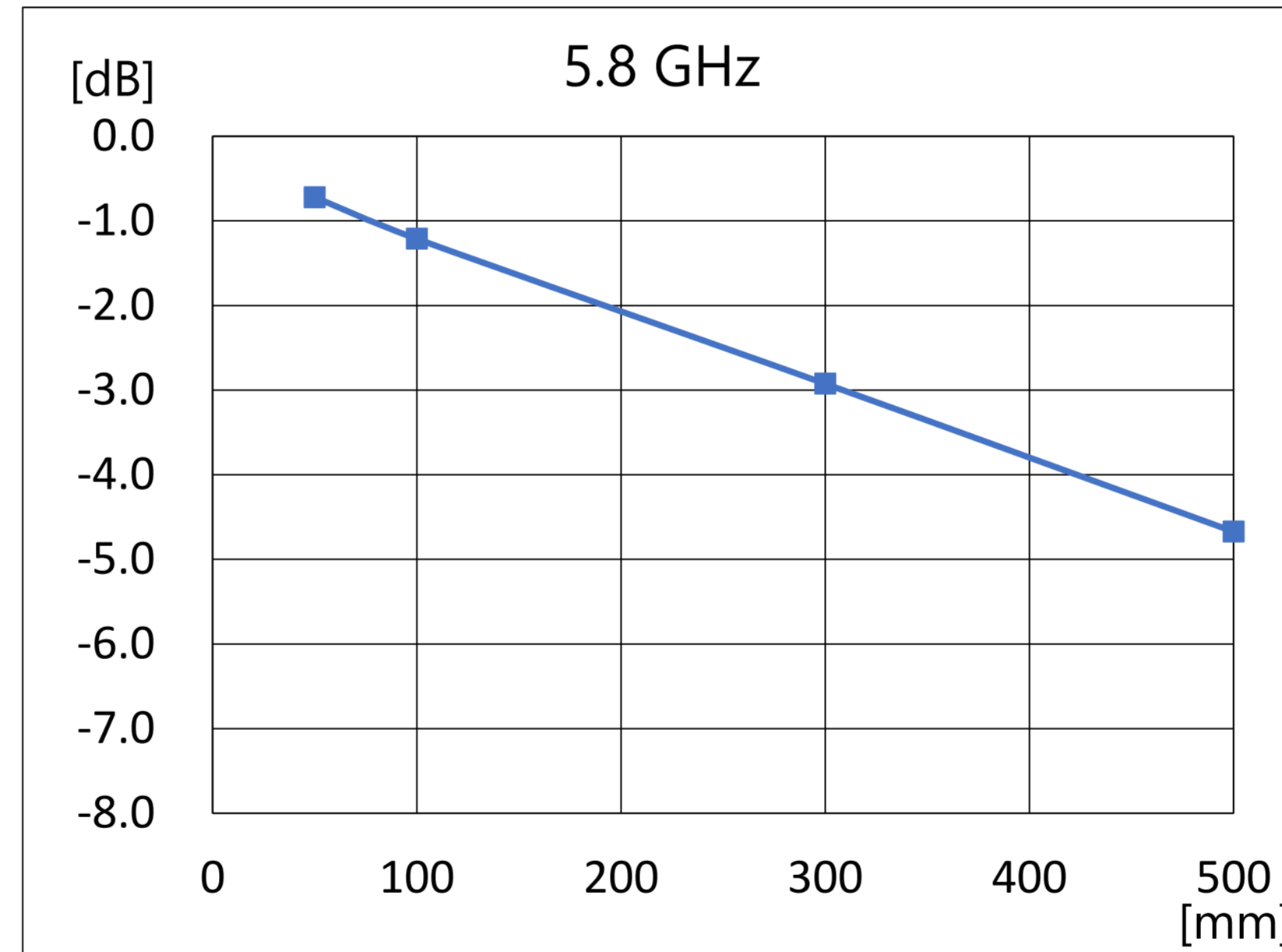
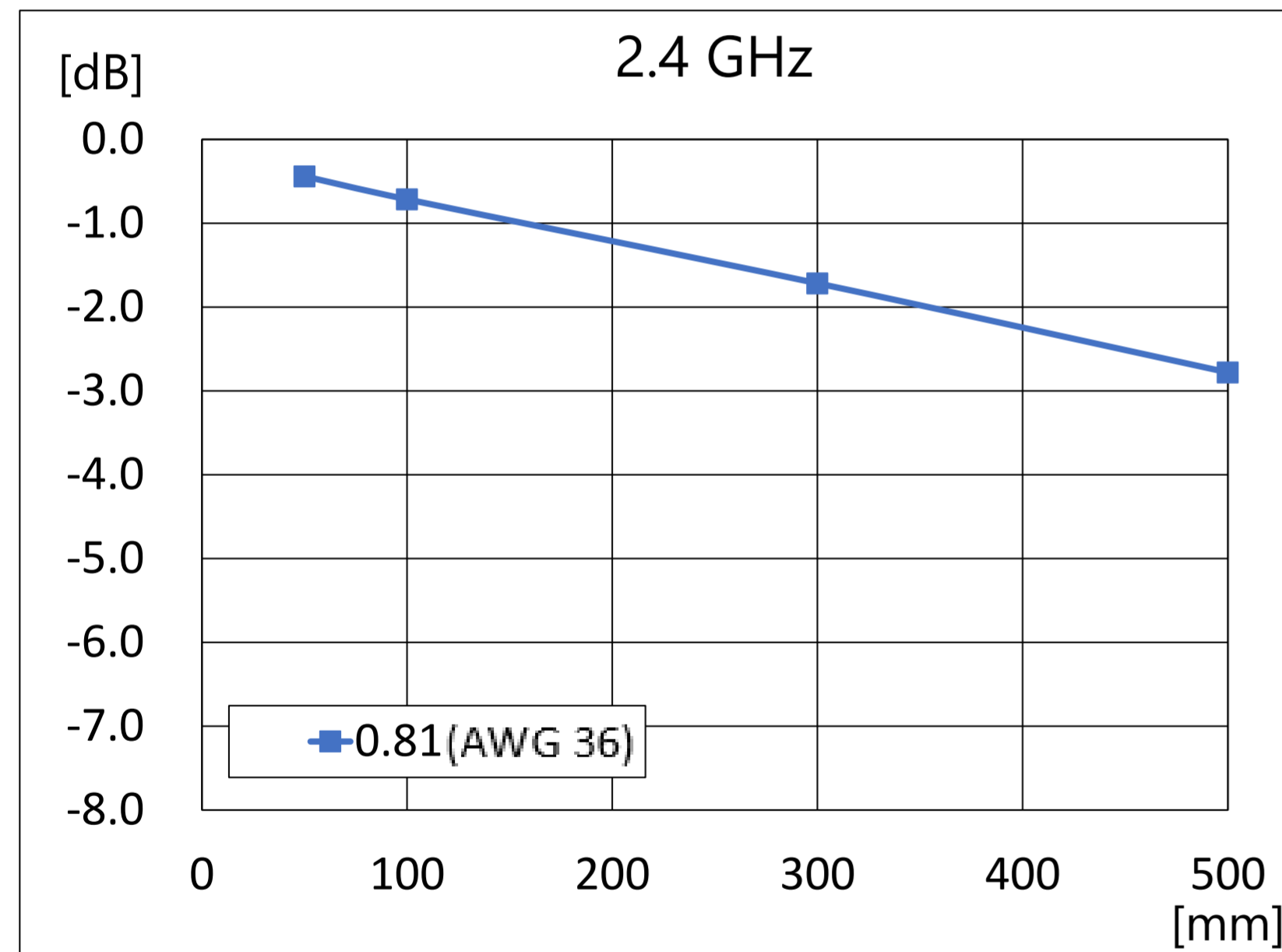
# Cable insertion loss : MHF<sup>®</sup> I

■ Harness Length (mm) vs Insertion Loss (S21)



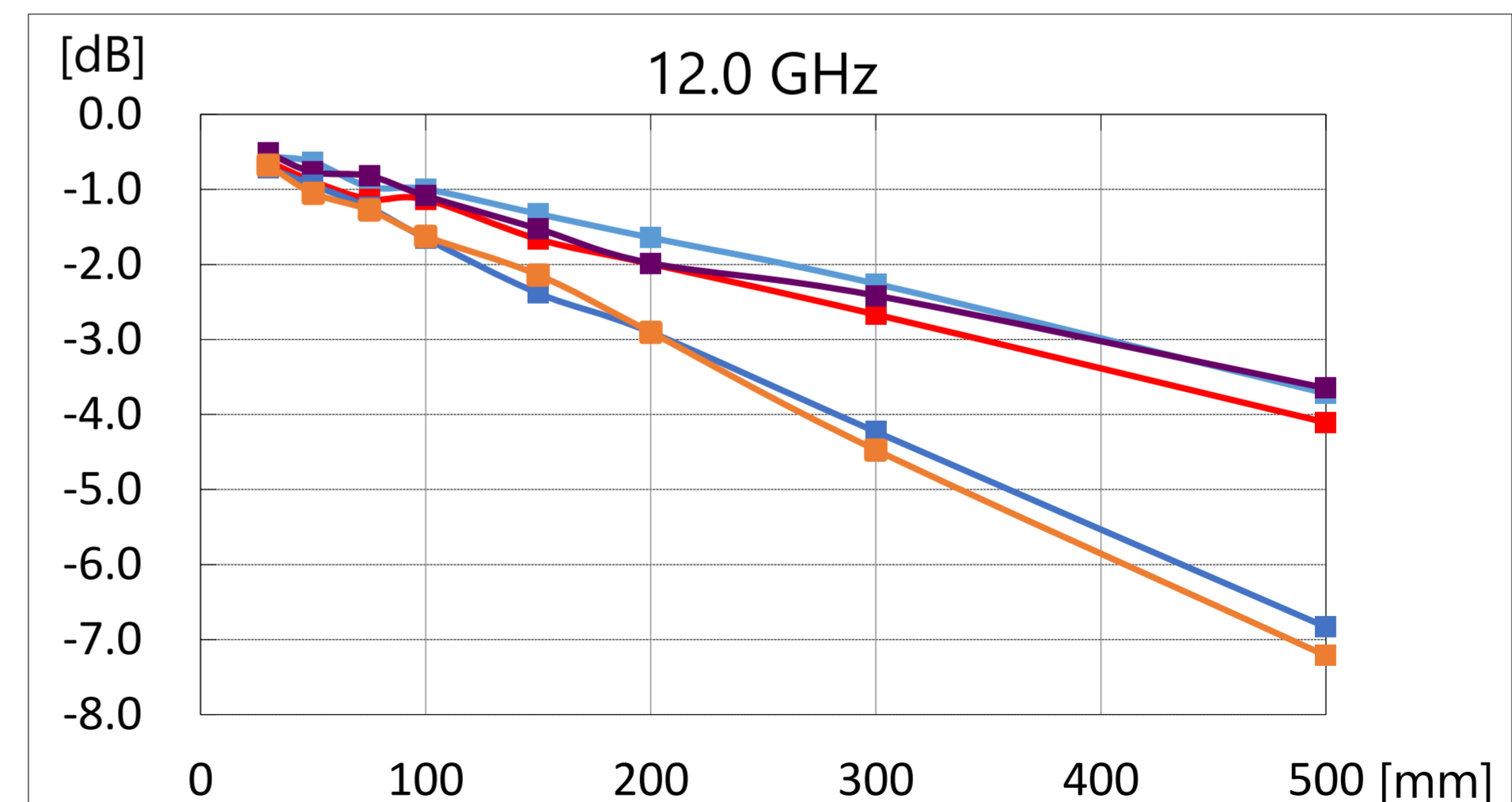
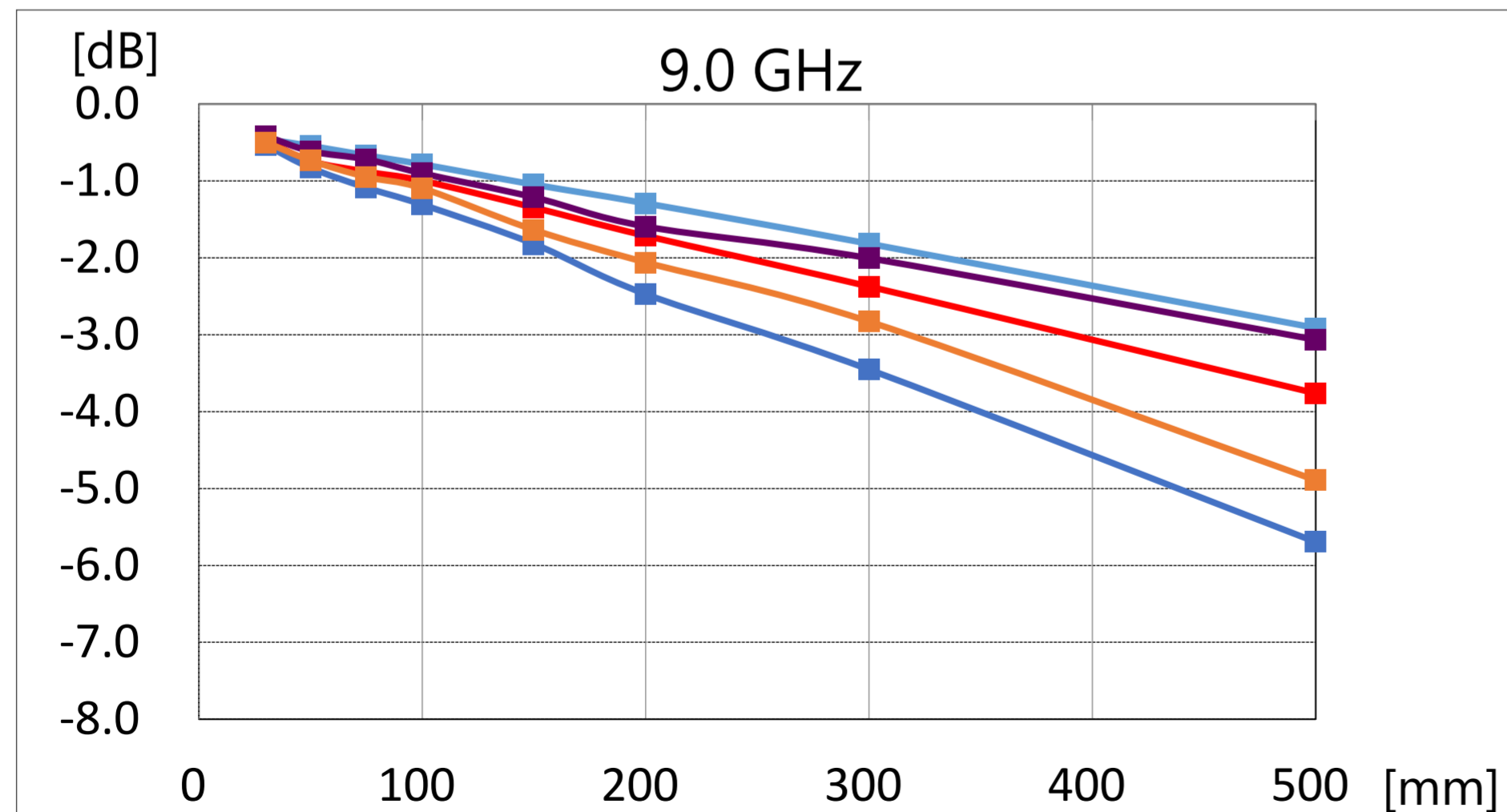
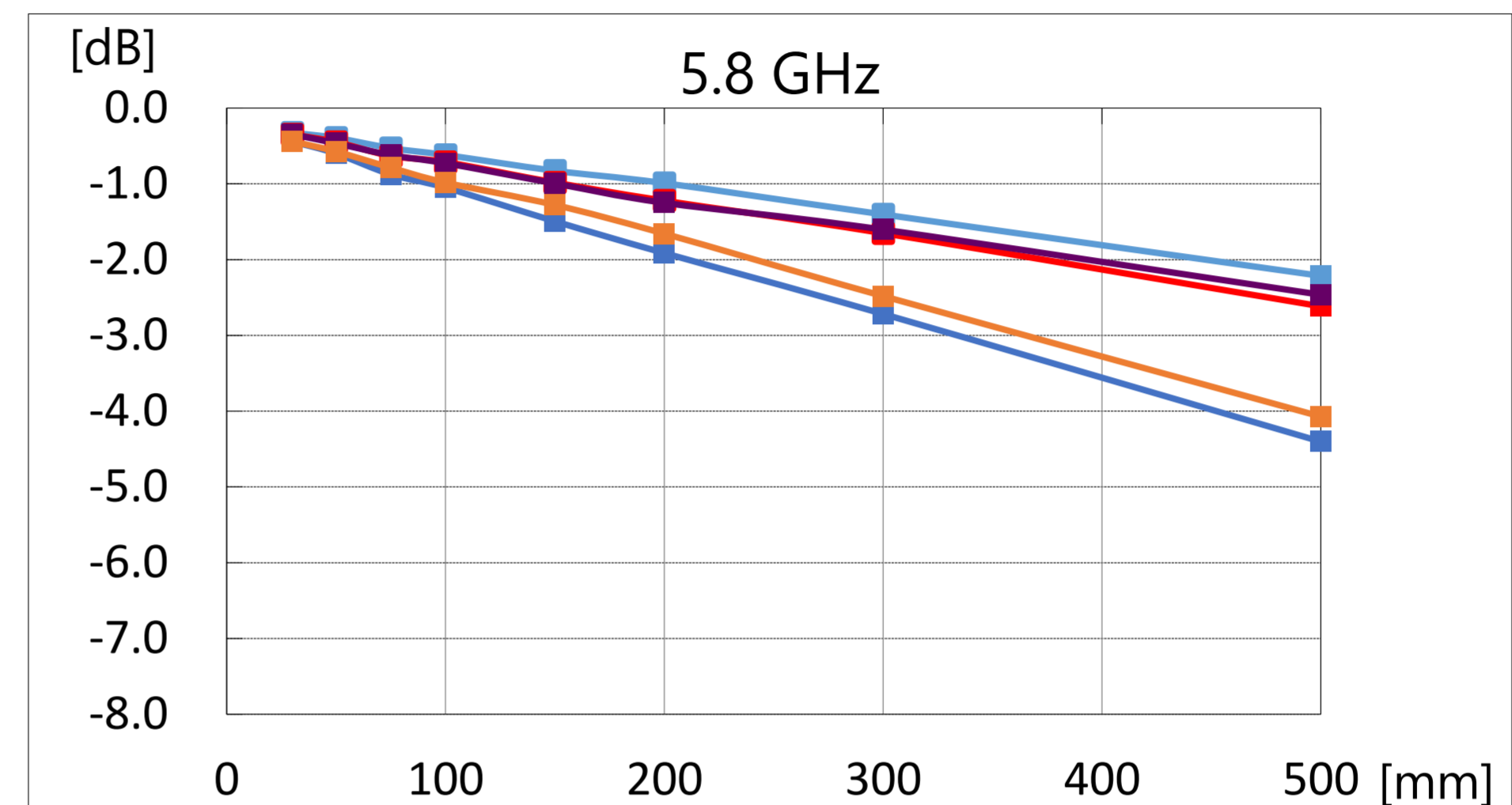
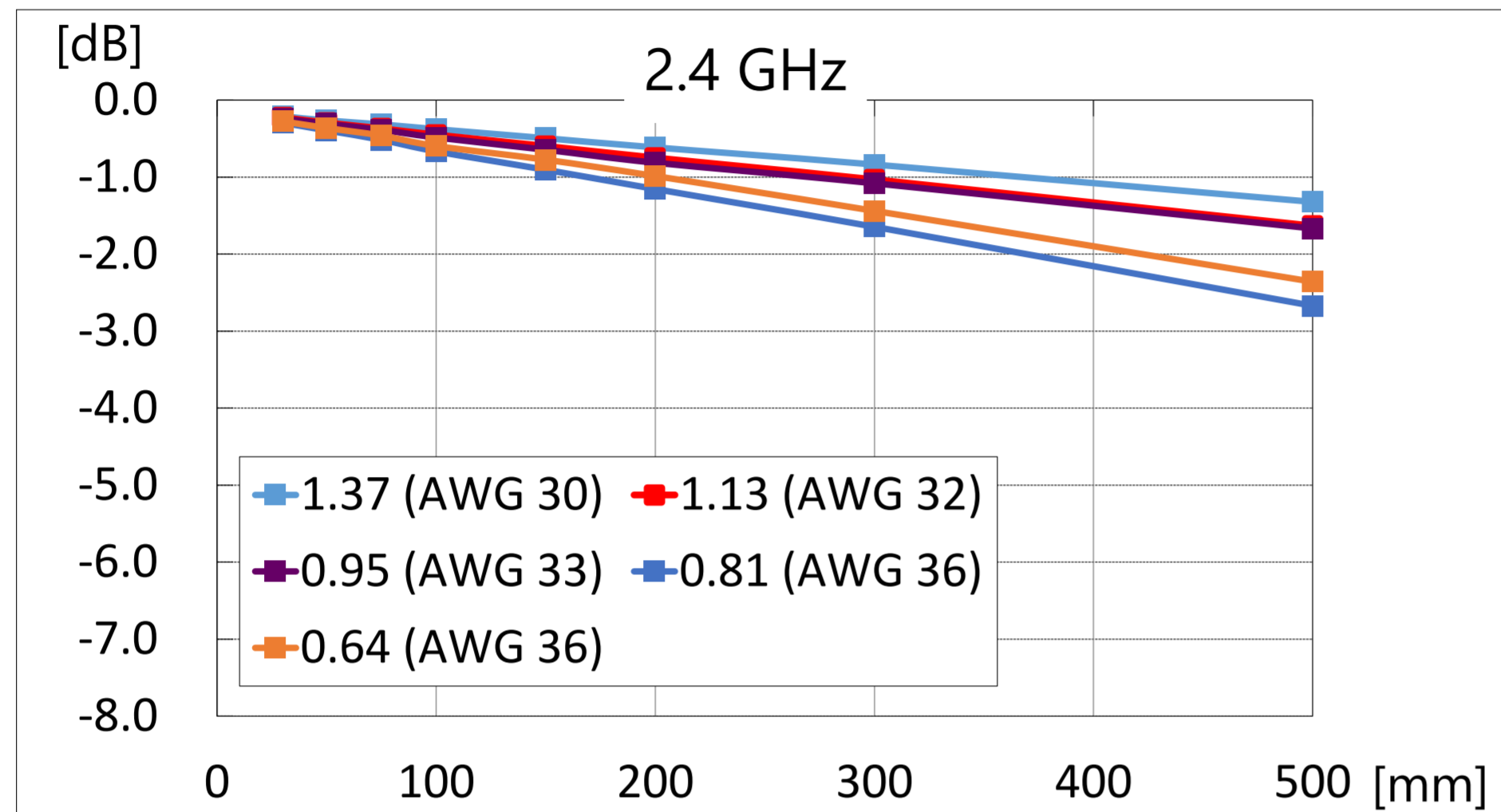
# Cable insertion loss : MHF<sup>®</sup> 4

■ Harness Length (mm) vs Insertion Loss (S21)



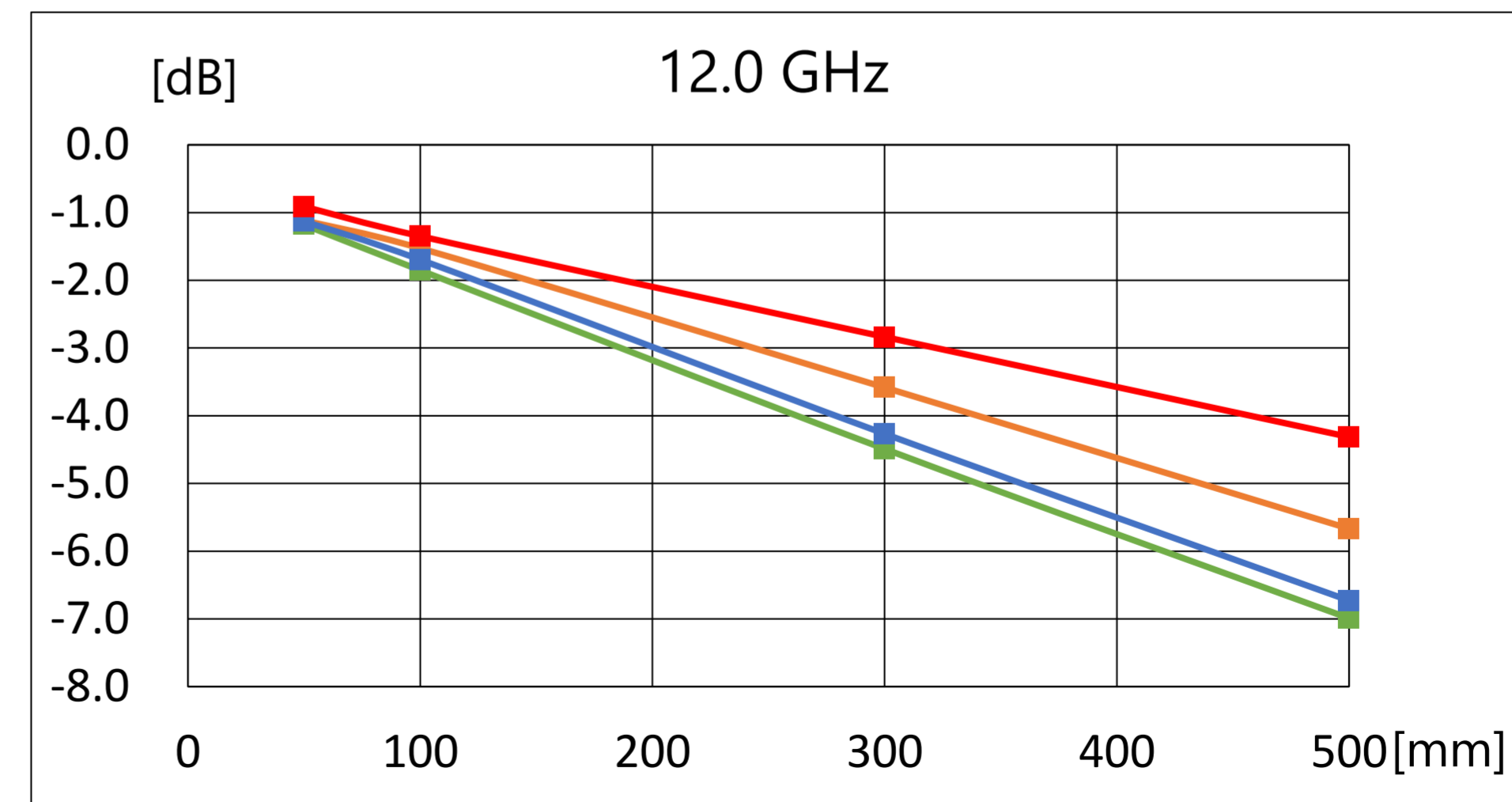
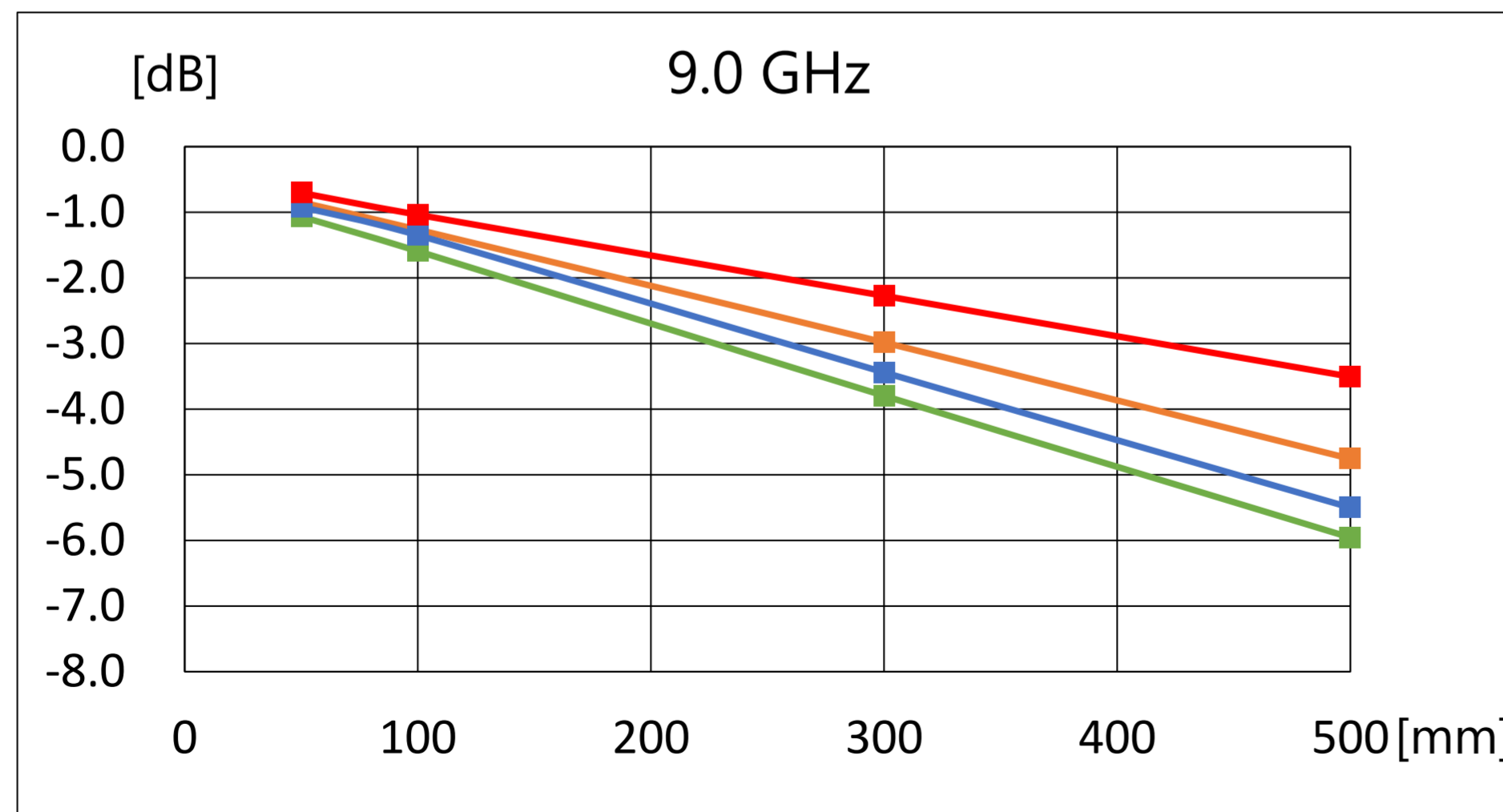
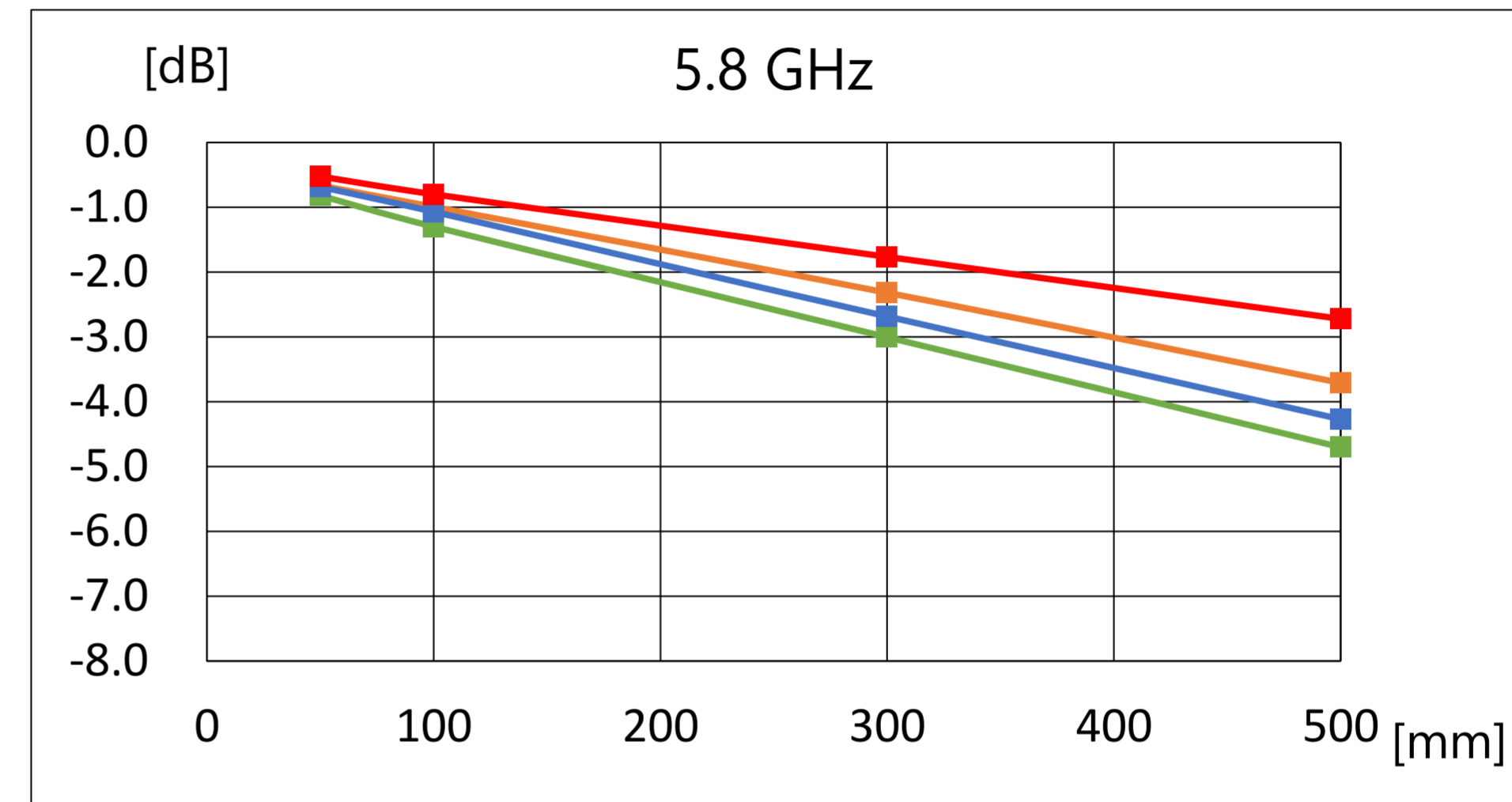
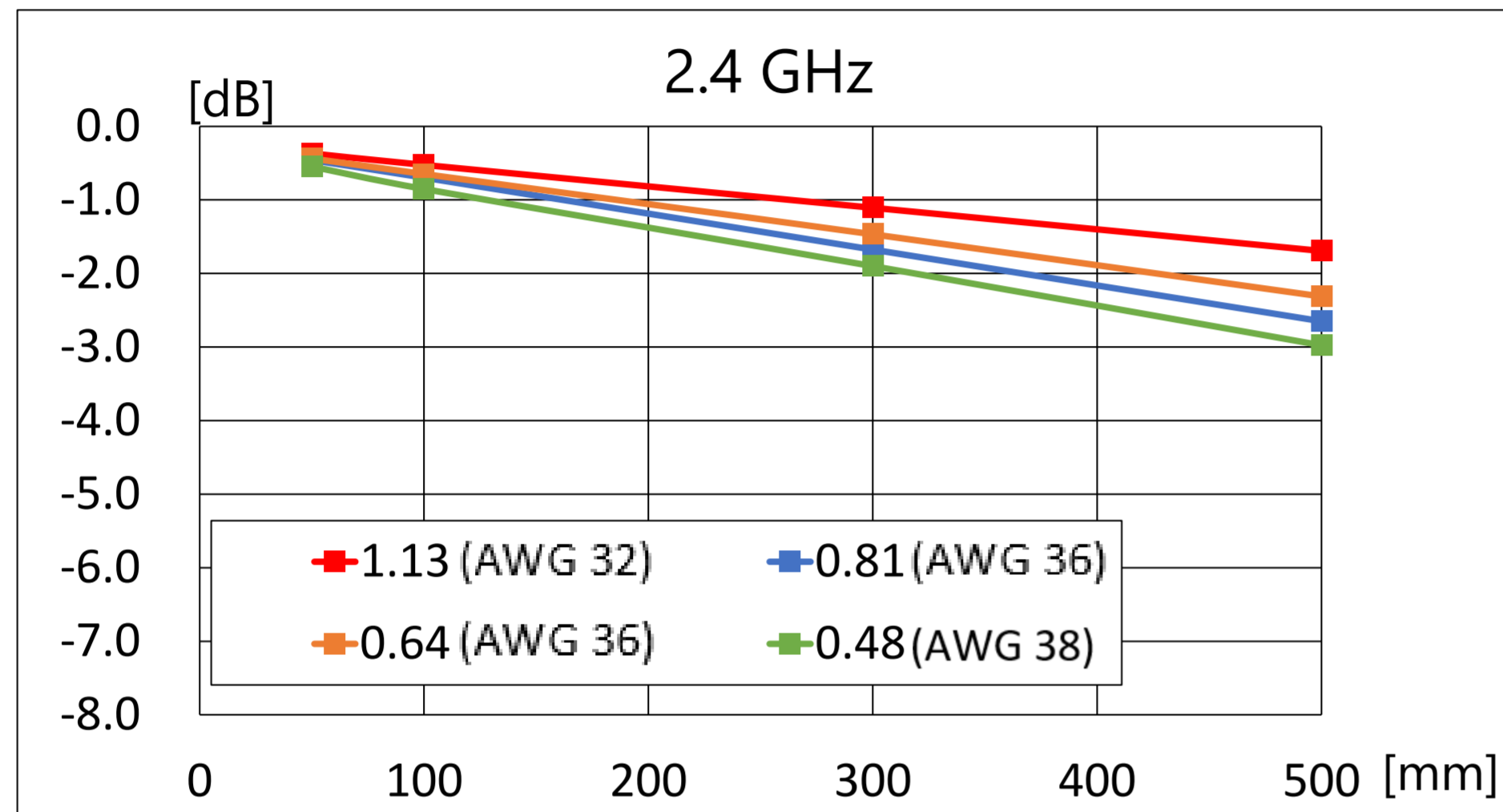
# Cable insertion loss : MHF<sup>®</sup> 4L

## ■ Harness Length (mm) vs Insertion Loss (S21)



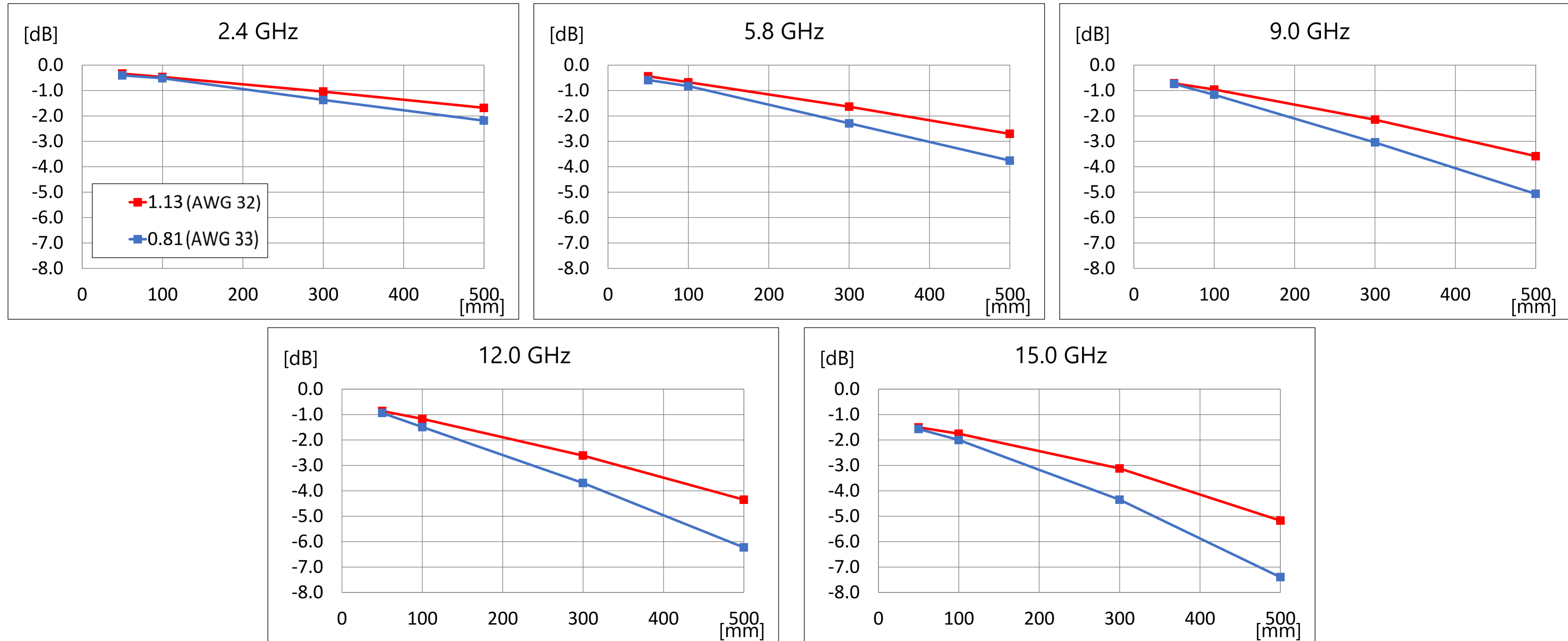
# Cable insertion loss : MHF<sup>®</sup> 5

■ Harness Length (mm) vs Insertion Loss (S21)



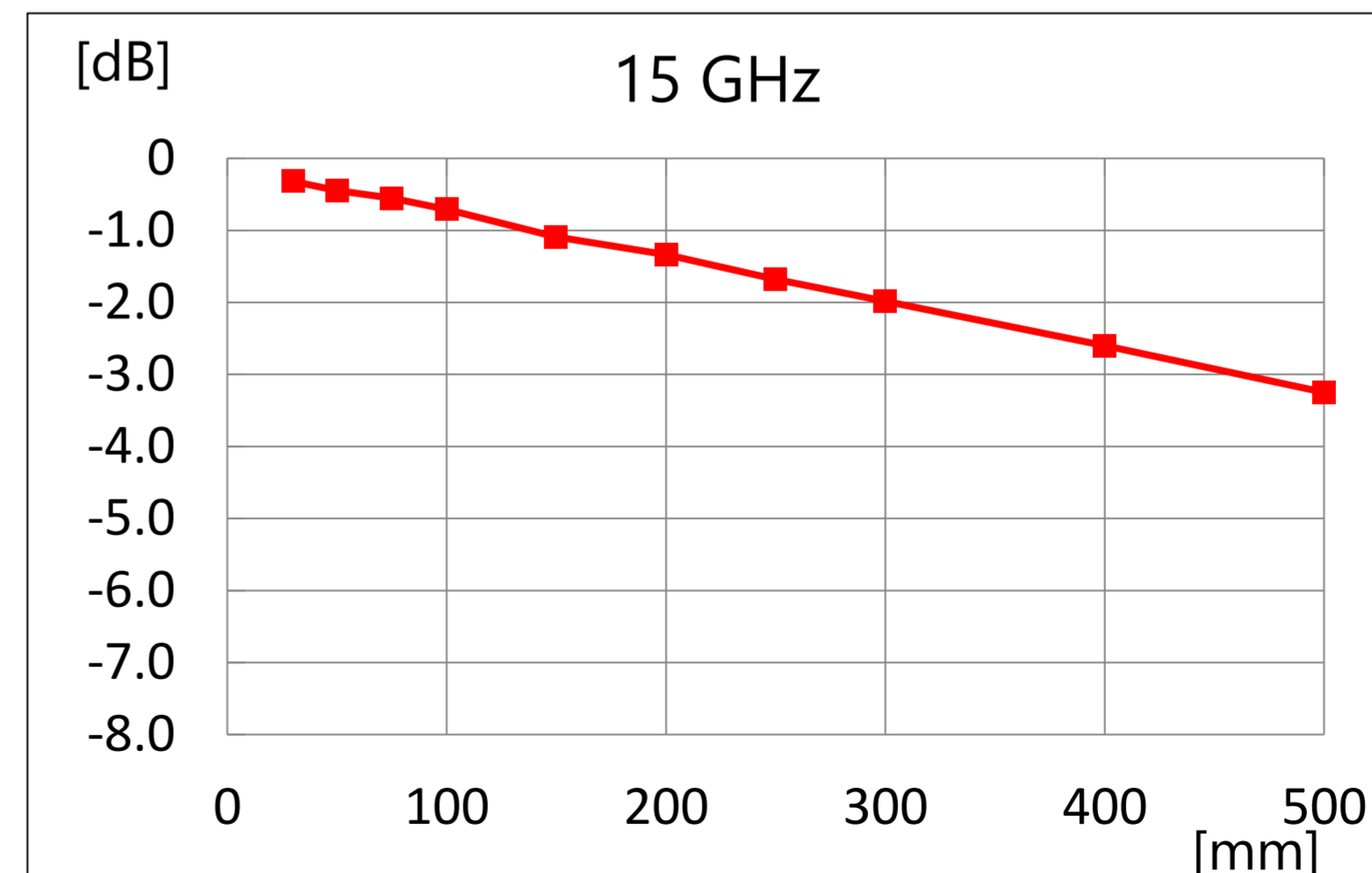
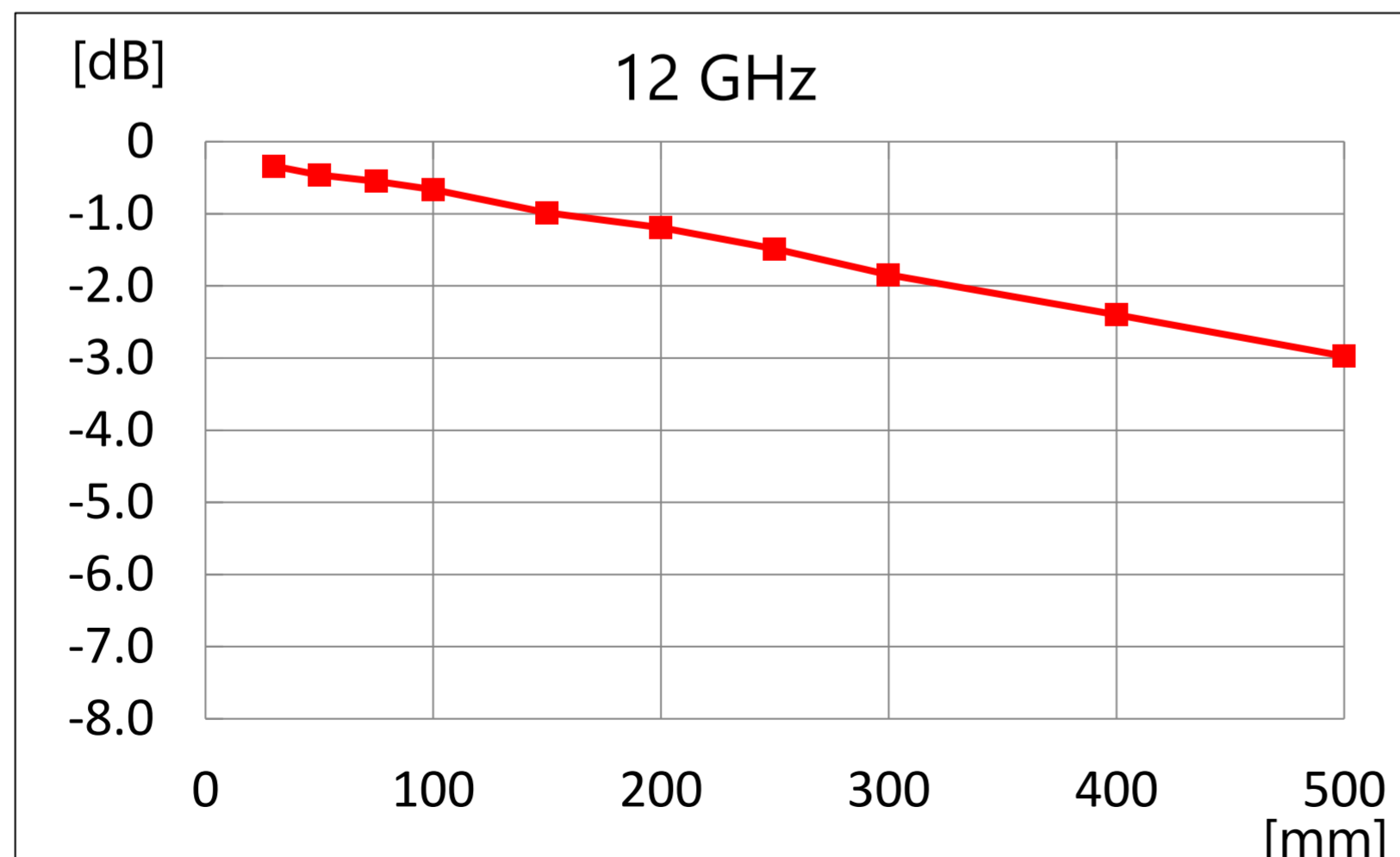
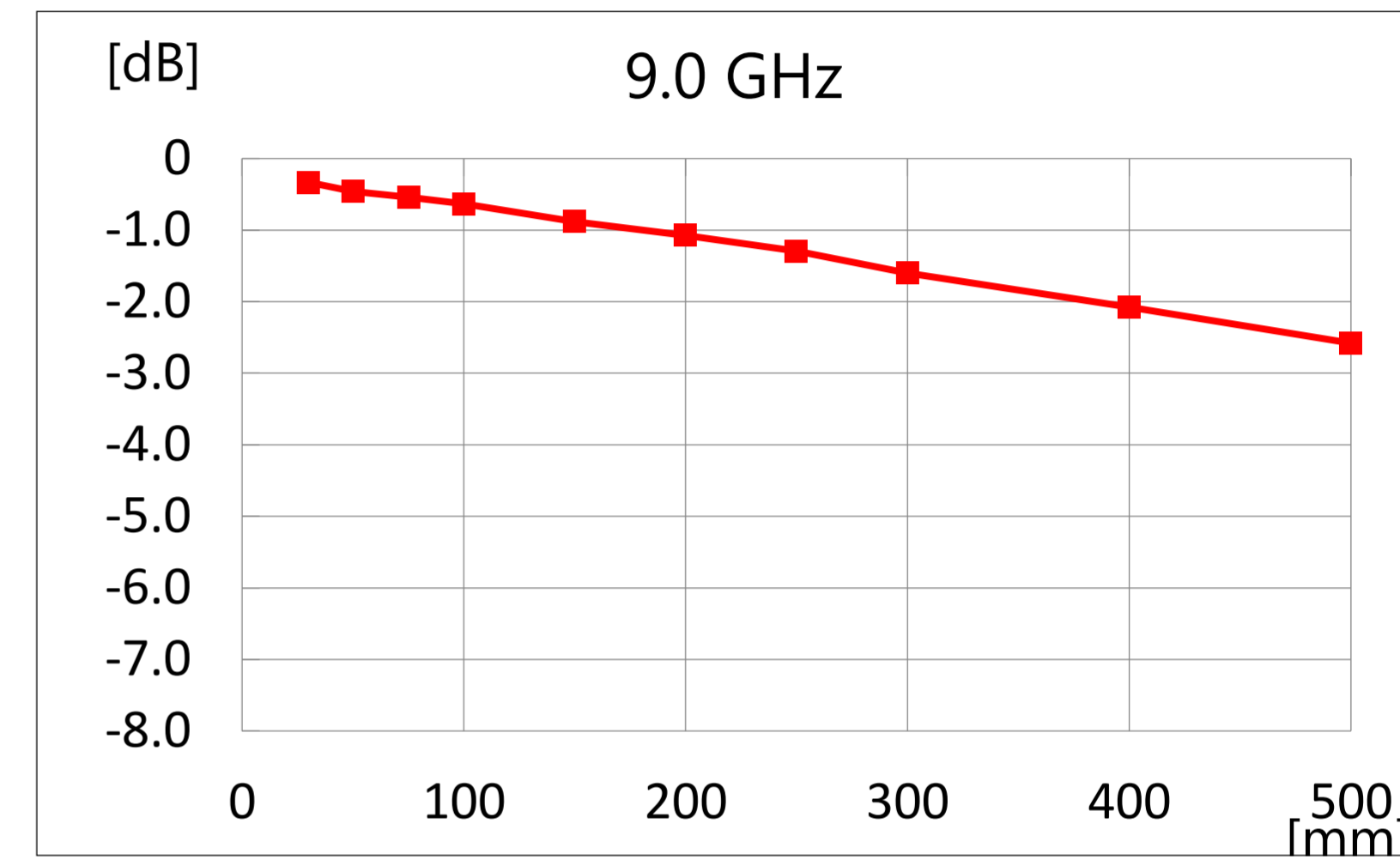
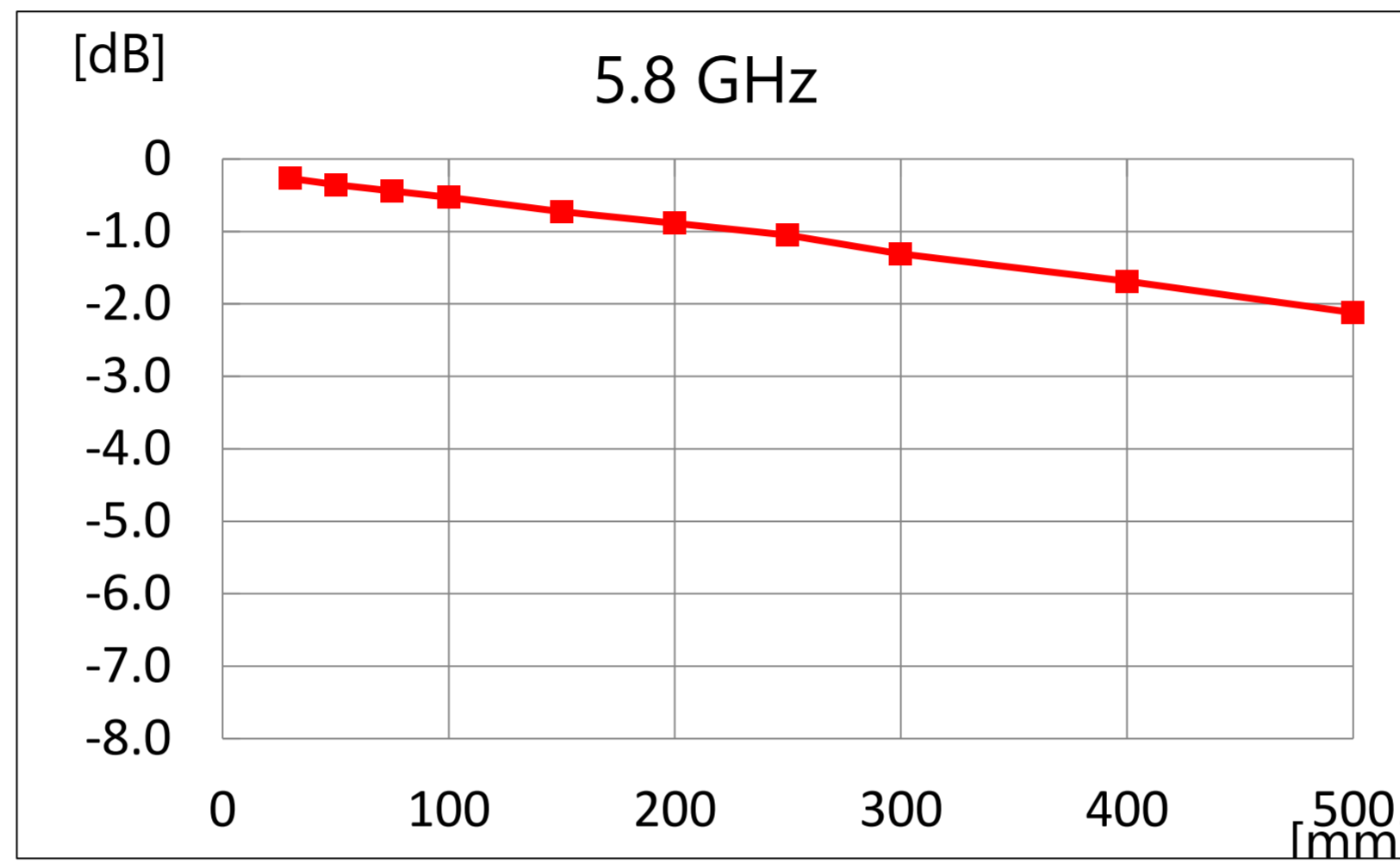
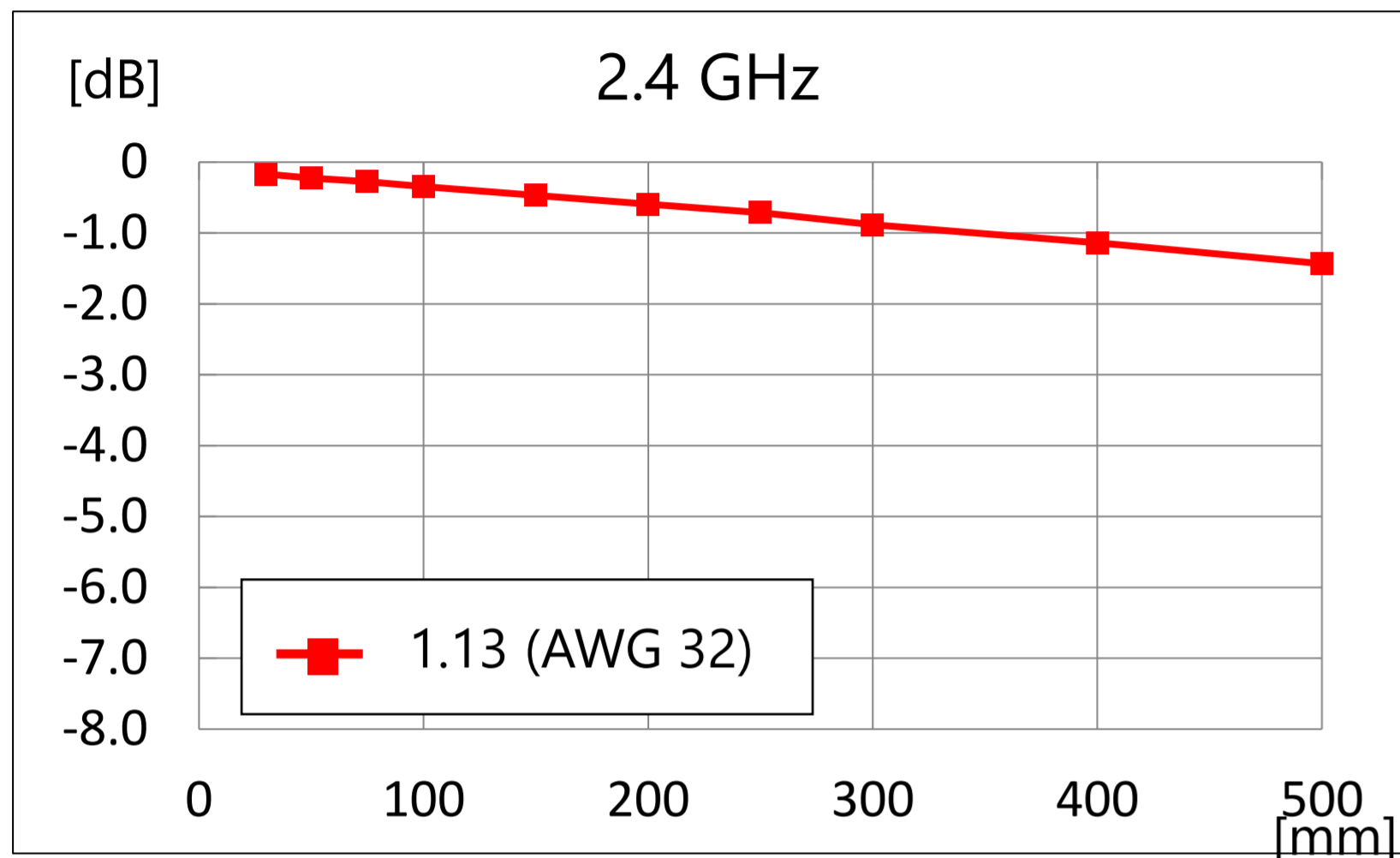
# Cable insertion loss : MHF<sup>®</sup> 5L

■ Harness Length (mm) vs Insertion Loss (S21)



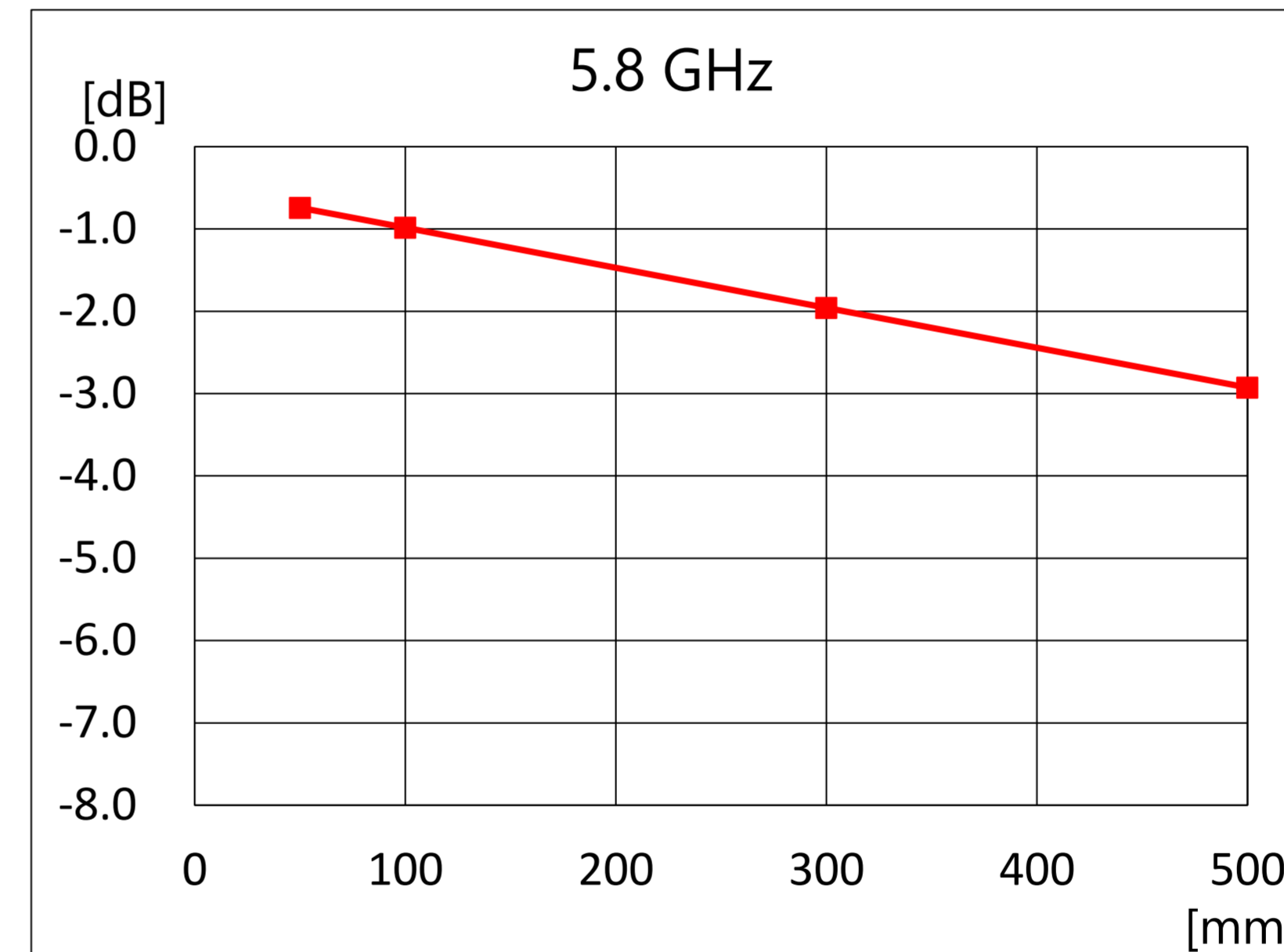
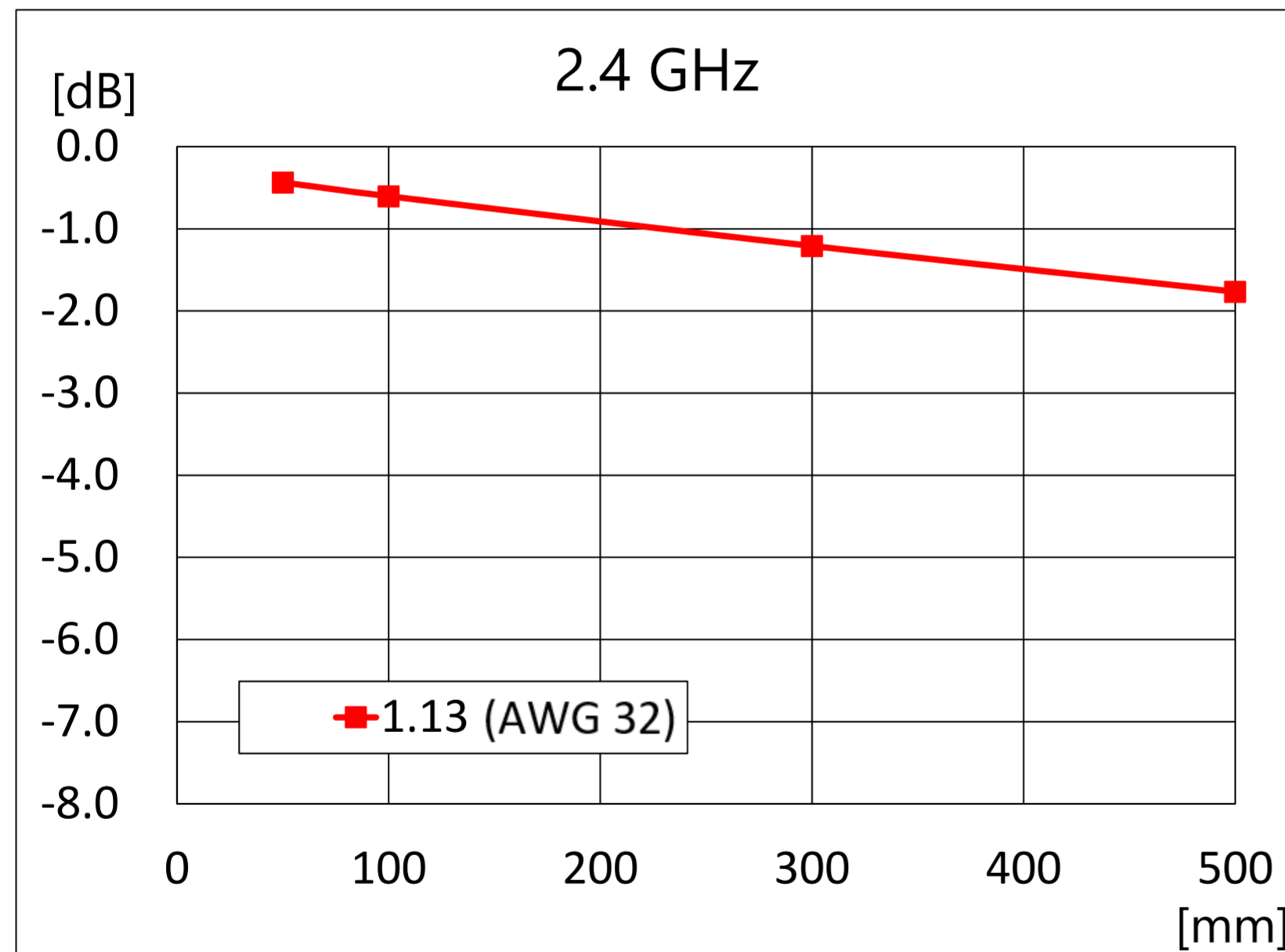
# Cable insertion loss : MHF<sup>®</sup> 7S

■ Harness Length (mm) vs Insertion Loss (S21)



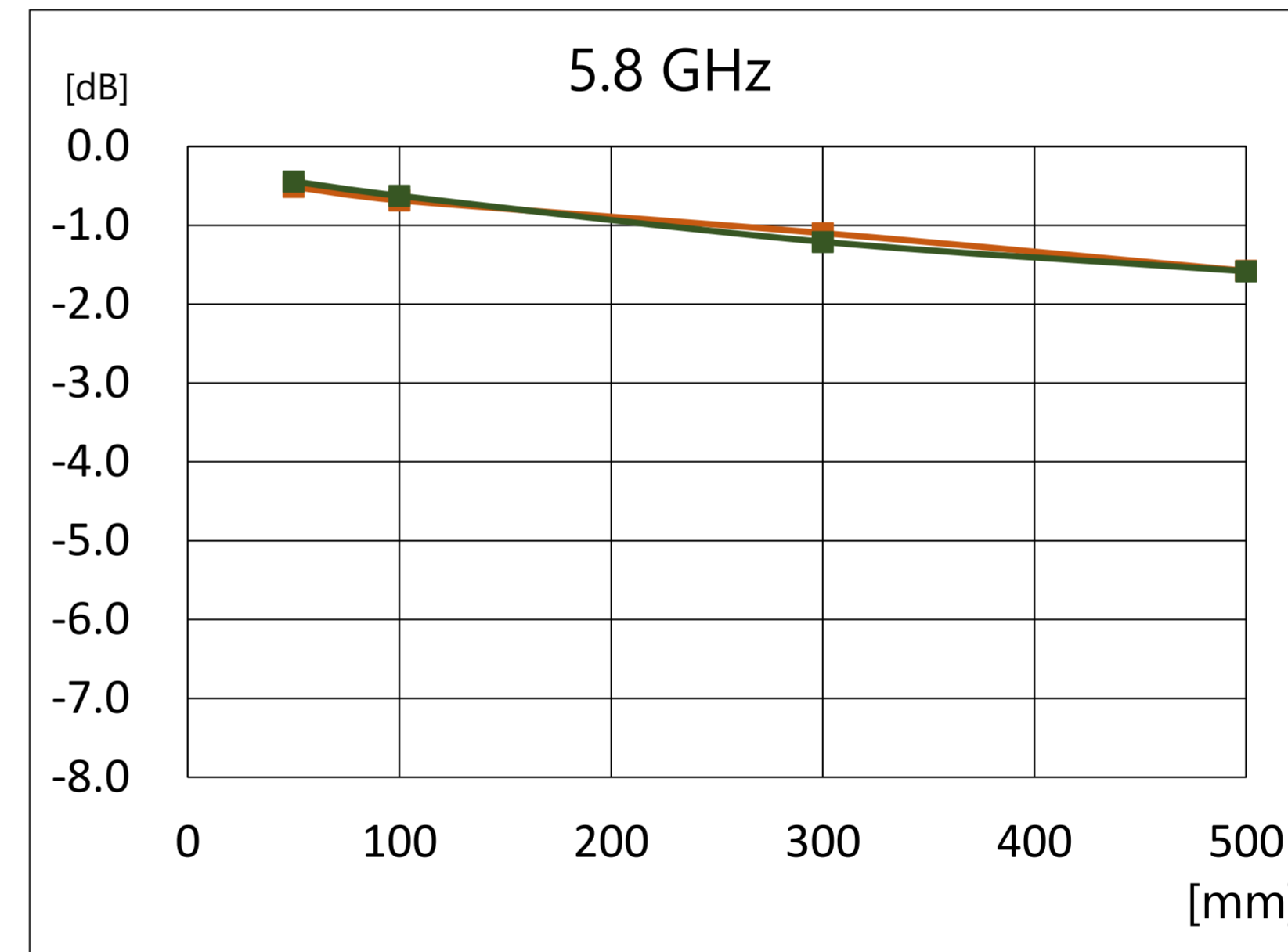
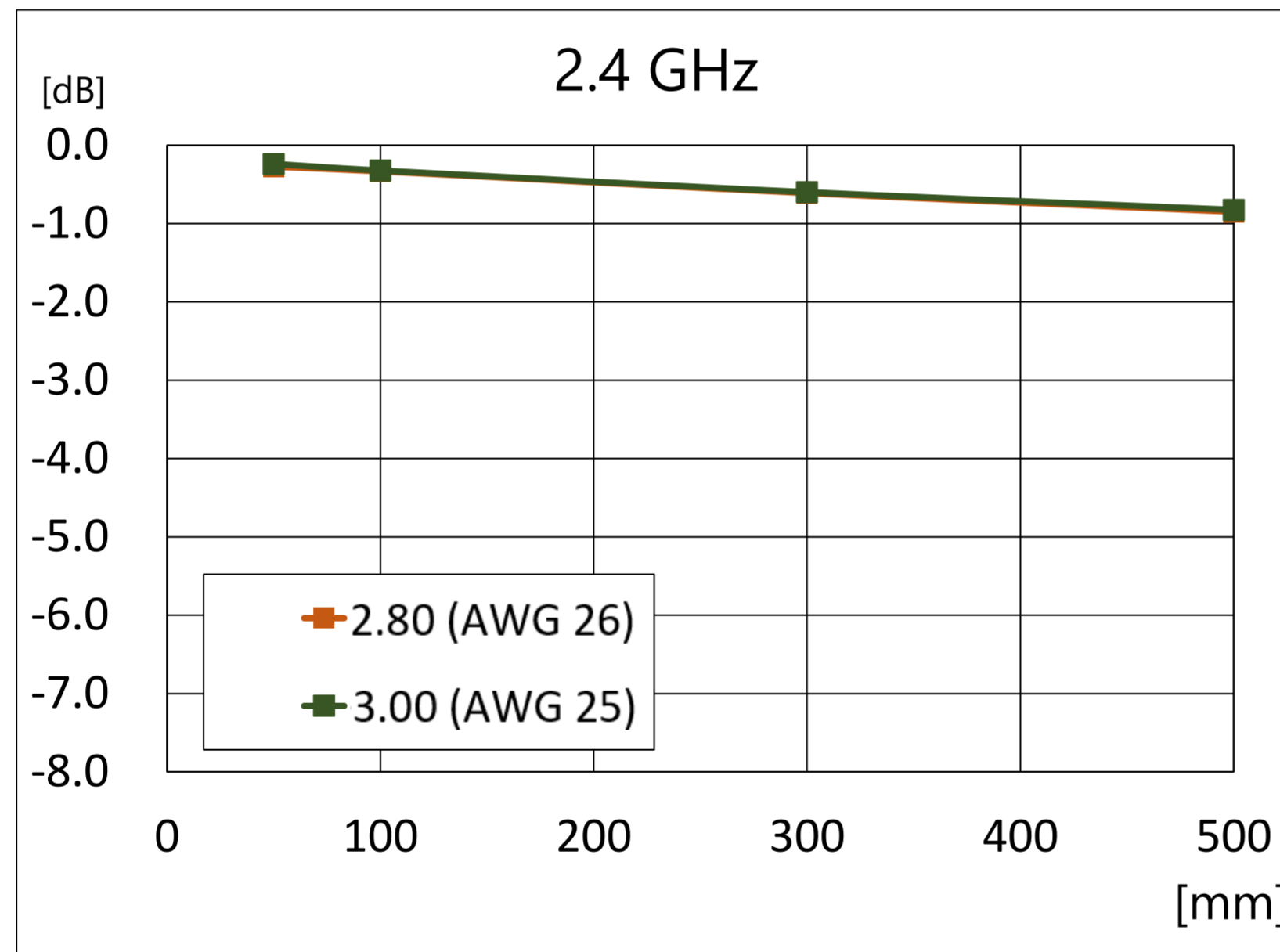
# Cable insertion loss : MHF<sup>®</sup>-SW23

■ Harness Length (mm) vs Insertion Loss (S21)

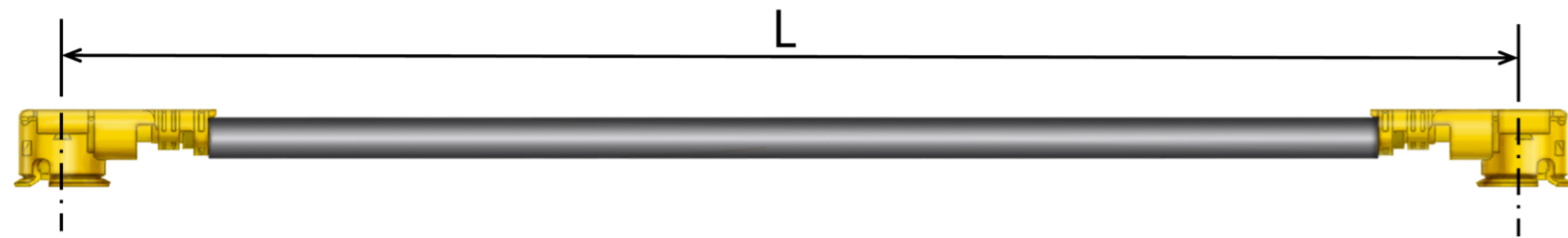


# Cable insertion loss : MHF<sup>®</sup>-TI

■ Harness Length (mm) vs Insertion Loss (S21)



# MHF® I standard harness



- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.

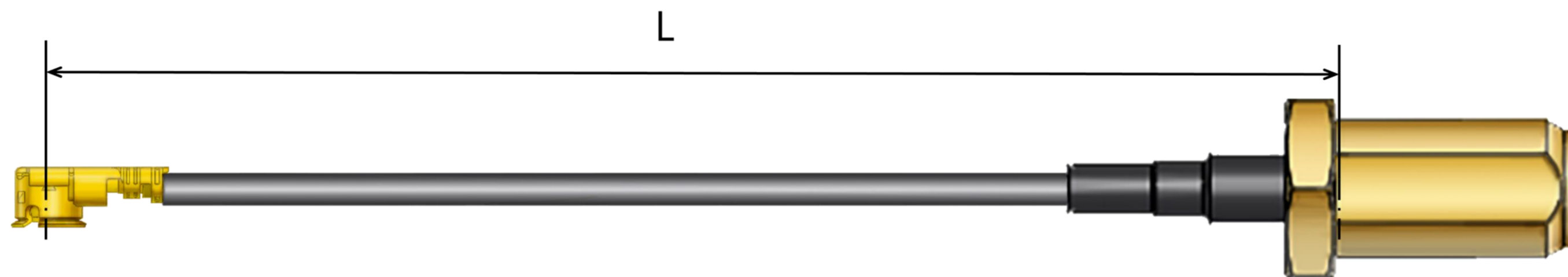


Part Number Description	Part Number (Link to Drawing)	Sample available
MHF I-I harness OD=0.81mm L=100mm	<a href="#">8-25-0819</a>	<a href="#">Contact us</a>
MHF I-I harness OD=0.81mm L=200mm	<a href="#">8-25-0820</a>	<a href="#">Contact us</a>
MHF I-I harness OD=0.81mm L=500mm	<a href="#">8-25-0823</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.13mm L=50mm	<a href="#">8-24-0113</a>	<a href="#">Buy from Digikey</a>
MHF I-I harness OD=1.13mm L=100mm	<a href="#">8-24-0114</a>	<a href="#">Buy from Digikey</a>
MHF I-I harness OD=1.13mm L=200mm	<a href="#">8-21-0048</a>	<a href="#">Buy from Digikey</a>
MHF I-I harness OD=1.13mm L=500mm	<a href="#">8-24-0115</a>	<a href="#">Buy from Digikey</a>
MHF I-I harness OD=1.32mm L=100mm	<a href="#">8-25-0814</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.32mm L=200mm	<a href="#">8-25-0815</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.32mm L=500mm	<a href="#">8-25-0818</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.37mm L=50mm	<a href="#">8-24-0140</a>	<a href="#">Buy from Digikey</a>
MHF I-I harness OD=1.37mm L=100mm	<a href="#">8-24-0141</a>	<a href="#">Buy from Digikey</a>
MHF I-I harness OD=1.37mm L=200mm	<a href="#">8-24-0142</a>	<a href="#">Buy from Digikey</a>
MHF I-I harness OD=1.37mm L=500mm	<a href="#">8-24-0143</a>	<a href="#">Buy from Digikey</a>
MHF I-I harness OD=1.80mm L=100mm	<a href="#">8-25-0858</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.80mm L=200mm	<a href="#">8-25-0859</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.80mm L=500mm	<a href="#">8-25-0862</a>	<a href="#">Contact us</a>

Part Number Description	Part Number (Link to Drawing)	Sample available
MHF I-I harness OD=0.81mm L=100mm 180 degree orientation	<a href="#">8-25-0832</a>	<a href="#">Contact us</a>
MHF I-I harness OD=0.81mm L=200mm 180 degree orientation	<a href="#">8-25-0833</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.13mm L=100mm 180 degree orientation	<a href="#">8-25-0827</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.13mm L=200mm 180 degree orientation	<a href="#">8-25-0828</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.32mm L=100mm 180 degree orientation	<a href="#">8-25-0837</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.32mm L=200mm 180 degree orientation	<a href="#">8-25-0838</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.37mm L=100mm 180 degree orientation	<a href="#">8-25-0845</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.37mm L=200mm 180 degree orientation	<a href="#">8-25-0846</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.80mm L=100mm 180 degree orientation	<a href="#">8-25-0853</a>	<a href="#">Contact us</a>
MHF I-I harness OD=1.80mm L=200mm 180 degree orientation	<a href="#">8-25-0854</a>	<a href="#">Contact us</a>

# MHF® I standard harness

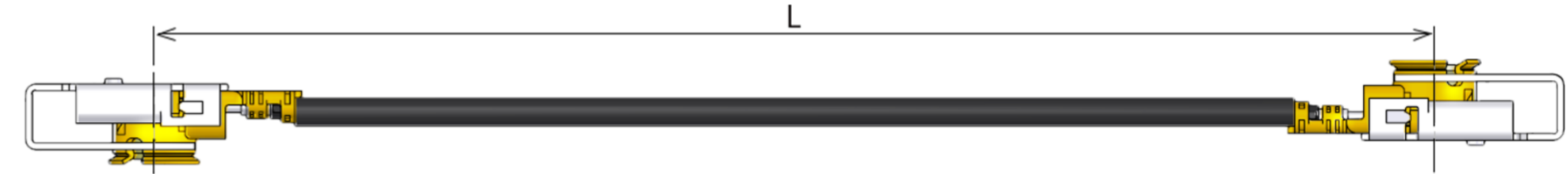
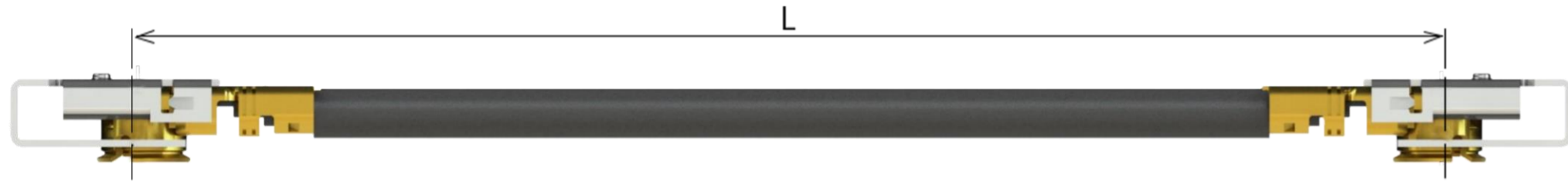
- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.



Part Number Description	Part Number (Link to Drawing)	Sample available
MHF I-SMA Jack harness OD=1.13mm L=100mm	<a href="#">8-25-0046</a>	<a href="#">Contact us</a>
MHF I-SMA Jack harness OD=1.13mm L=150mm	<a href="#">8-25-0047</a>	<a href="#">Contact us</a>
MHF I-SMA Jack harness OD=1.13mm L=200mm	<a href="#">8-25-0048</a>	<a href="#">Contact us</a>
MHF I-SMA Jack harness OD=1.37mm L=100mm	<a href="#">8-25-0066</a>	<a href="#">Contact us</a>
MHF I-SMA Jack harness OD=1.37mm L=150mm	<a href="#">8-25-0067</a>	<a href="#">Contact us</a>
MHF I-SMA Jack harness OD=1.37mm L=200mm	<a href="#">8-25-0068</a>	<a href="#">Contact us</a>

# MHF® | LK standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.

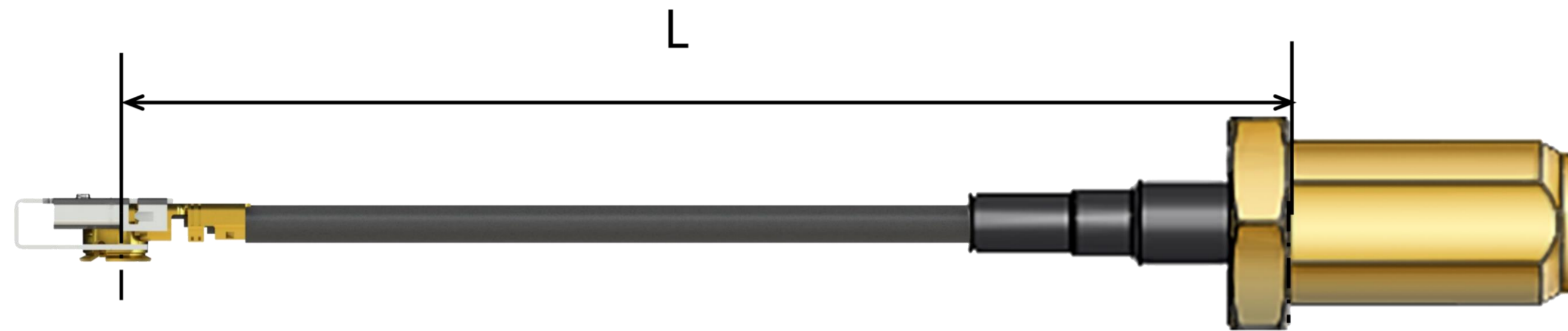


Part Number Description	Part Number (Link to Drawing)	Sample available
MHF I LK-I LK harness OD=0.81mm L=100mm	<a href="#">8-25-0458</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=0.81mm L=200mm	<a href="#">8-25-0459</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=0.81mm L=500mm	<a href="#">8-25-0460</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.13mm L=100mm	<a href="#">8-23-0118</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.13mm L=200mm	<a href="#">8-21-0047</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.13mm L=500mm	<a href="#">8-23-0120</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.32mm L=100mm	<a href="#">8-25-0452</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.32mm L=200mm	<a href="#">8-25-0453</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.32mm L=500mm	<a href="#">8-25-0454</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.37mm L=100mm	<a href="#">8-23-0119</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.37mm L=200mm	<a href="#">8-21-0049</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.37mm L=500mm	<a href="#">8-23-0121</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.80mm L=100mm	<a href="#">8-25-0443</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.80mm L=200mm	<a href="#">8-25-0444</a>	<a href="#">Buy from Digikey</a>
MHF I LK-I LK harness OD=1.80mm L=500mm	<a href="#">8-25-0445</a>	<a href="#">Buy from Digikey</a>

Part Number Description	Part Number (Link to Drawing)	Sample available
MHF I LK-I LK harness OD=0.81mm L=100mm 180 degree orientation	<a href="#">8-25-0880</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=0.81mm L=200mm 180 degree orientation	<a href="#">8-25-0881</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=1.13mm L=100mm 180 degree orientation	<a href="#">8-25-0864</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=1.13mm L=200mm 180 degree orientation	<a href="#">8-25-0865</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=1.32mm L=100mm 180 degree orientation	<a href="#">8-25-0891</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=1.32mm L=200mm 180 degree orientation	<a href="#">8-25-0892</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=1.37mm L=100mm 180 degree orientation	<a href="#">8-25-0901</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=1.37mm L=200mm 180 degree orientation	<a href="#">8-25-0902</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=1.80mm L=100mm 180 degree orientation	<a href="#">8-25-0917</a>	<a href="#">Contact us</a>
MHF I LK-I LK harness OD=1.80mm L=200mm 180 degree orientation	<a href="#">8-25-0918</a>	<a href="#">Contact us</a>

# MHF® | LK standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.



Part Number Description	Part Number (Link to Drawing)	Sample available
MHF   LK-SMA Jack harness OD=1.13mm L=100mm	<a href="#">8-25-0049</a>	<a href="#">Contact us</a>
MHF   LK-SMA Jack harness OD=1.13mm L=150mm	<a href="#">8-25-0050</a>	<a href="#">Contact us</a>
MHF   LK-SMA Jack harness OD=1.13mm L=200mm	<a href="#">8-25-0051</a>	<a href="#">Contact us</a>
MHF   LK-SMA Jack harness OD=1.37mm L=100mm	<a href="#">8-25-0069</a>	<a href="#">Contact us</a>
MHF   LK-SMA Jack harness OD=1.37mm L=150mm	<a href="#">8-25-0070</a>	<a href="#">Contact us</a>
MHF   LK-SMA Jack harness OD=1.37mm L=200mm	<a href="#">8-25-0071</a>	<a href="#">Contact us</a>

# MHF® 4 standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.

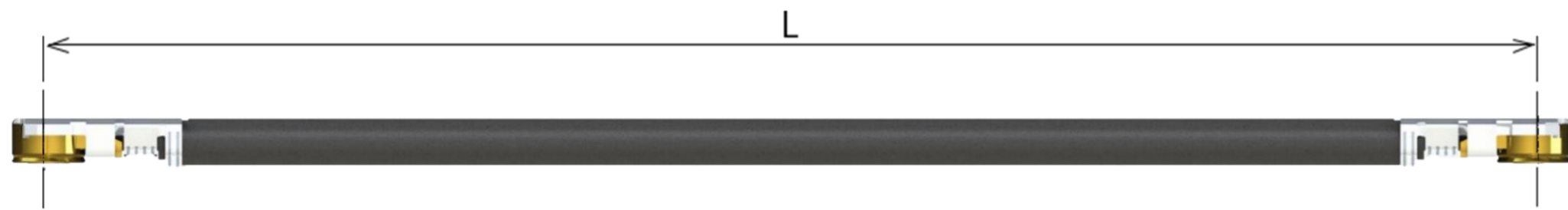


Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 4-4 harness OD=0.81mm L=100mm	<a href="#">8-25-0886</a>	<a href="#">Contact us</a>
MHF 4-4 harness OD=0.81mm L=200mm	<a href="#">8-25-0887</a>	<a href="#">Contact us</a>
MHF 4-4 harness OD=0.81mm L=500mm	<a href="#">8-25-0890</a>	<a href="#">Contact us</a>

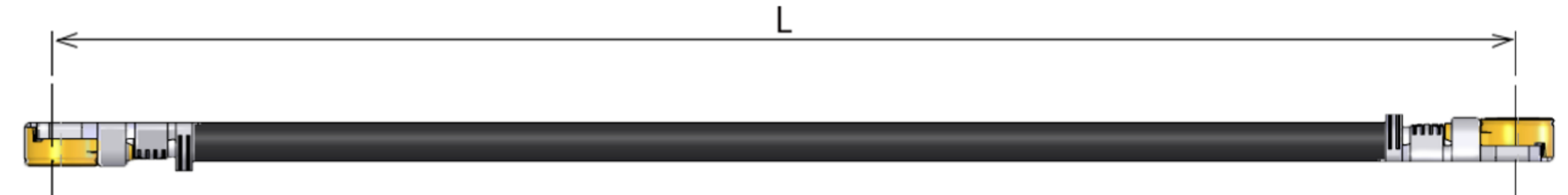


Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 4-4 harness OD=0.81mm L=100mm 180 degree orientation	<a href="#">8-25-0912</a>	<a href="#">Contact us</a>
MHF 4-4 harness OD=0.81mm L=200mm 180 degree orientation	<a href="#">8-25-0913</a>	<a href="#">Contact us</a>

# MHF® 4L standard harness



- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.

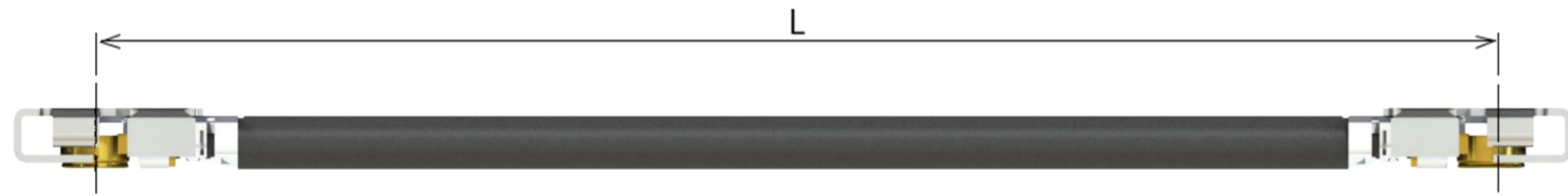


Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 4L-4L harness OD=0.64mm L=50mm	<a href="#">8-25-0437</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=0.64mm L=100mm	<a href="#">8-25-0438</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=0.64mm L=200mm	<a href="#">8-25-0439</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=0.81mm L=50mm	<a href="#">8-25-0466</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=0.81mm L=100mm	<a href="#">8-25-0467</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=0.81mm L=200mm	<a href="#">8-21-0042</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=0.81mm L=500mm	<a href="#">8-25-0928</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=0.95mm L=100mm	<a href="#">8-25-0953</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=0.95mm L=200mm	<a href="#">8-25-0954</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=0.95mm L=500mm	<a href="#">8-25-0957</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=1.13mm L=50mm	<a href="#">8-23-0115</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=1.13mm L=100mm	<a href="#">8-23-0112</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=1.13mm L=200mm	<a href="#">8-21-0043</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=1.13mm L=500mm	<a href="#">8-24-0128</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=1.37mm L=50mm	<a href="#">8-23-0116</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=1.37mm L=100mm	<a href="#">8-23-0113</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=1.37mm L=200mm	<a href="#">8-23-0114</a>	<a href="#">Buy from Digikey</a>
MHF 4L-4L harness OD=1.37mm L=500mm	<a href="#">8-24-0129</a>	<a href="#">Buy from Digikey</a>

Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 4L-4L harness OD=0.64mm L=100mm 180 degree orientation	<a href="#">8-25-0923</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=0.64mm L=200mm 180 degree orientation	<a href="#">8-25-0924</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=0.81mm L=100mm 180 degree orientation	<a href="#">8-25-0935</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=0.81mm L=200mm 180 degree orientation	<a href="#">8-25-0936</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=0.95mm L=100mm 180 degree orientation	<a href="#">8-25-0972</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=0.95mm L=200mm 180 degree orientation	<a href="#">8-25-0973</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=1.13mm L=100mm 180 degree orientation	<a href="#">8-25-0948</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=1.13mm L=200mm 180 degree orientation	<a href="#">8-25-0949</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=1.37mm L=100mm 180 degree orientation	<a href="#">8-25-0960</a>	<a href="#">Contact us</a>
MHF 4L-4L harness OD=1.37mm L=200mm 180 degree orientation	<a href="#">8-25-0961</a>	<a href="#">Contact us</a>

# MHF® 4L LK standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.

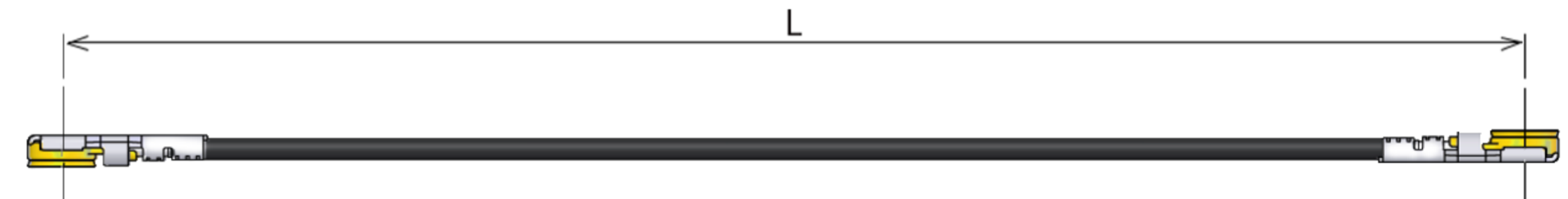


Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 4L LK-4L LK harness OD=1.37mm L=100mm	<a href="#">8-23-0110</a>	<a href="#">Buy from Digikey</a>
MHF 4L LK-4L LK harness OD=1.37mm L=200mm	<a href="#">8-21-0044</a>	<a href="#">Buy from Digikey</a>
MHF 4L LK-4L LK harness OD=1.37mm L=500mm	<a href="#">8-23-0111</a>	<a href="#">Buy from Digikey</a>

Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 4L LK-4L LK harness OD=1.37mm L=100mm 180 degree orientation	<a href="#">8-25-0978</a>	<a href="#">Contact us</a>
MHF 4L LK-4L LK harness OD=1.37mm L=200mm 180 degree orientation	<a href="#">8-25-0979</a>	<a href="#">Contact us</a>

# MHF® 5 standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.

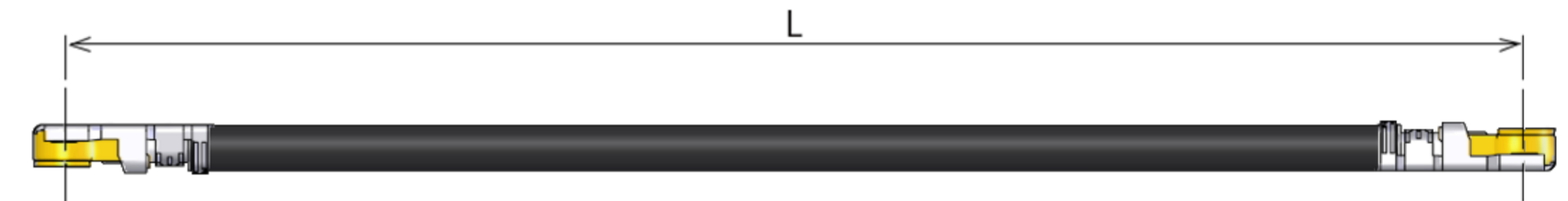
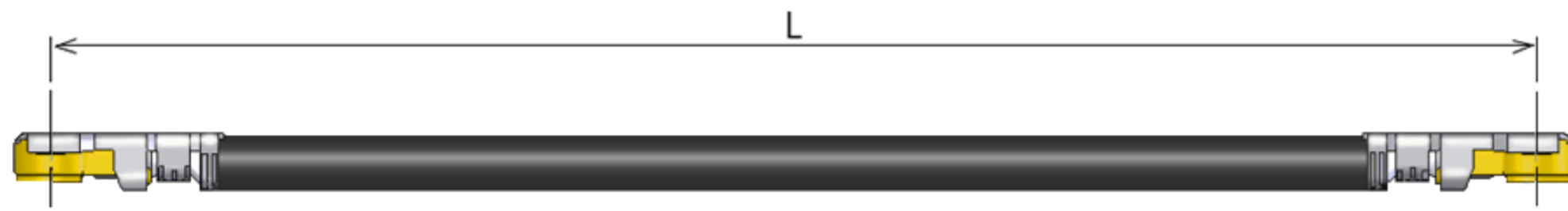


Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 5-5 harness OD=0.48mm L=50mm	<a href="#">8-25-0471</a>	<a href="#">Buy from Digikey</a>
MHF 5-5 harness OD=0.48mm L=100mm	<a href="#">8-25-0472</a>	<a href="#">Buy from Digikey</a>
MHF 5-5 harness OD=0.48mm L=200mm	<a href="#">8-25-0473</a>	<a href="#">Buy from Digikey</a>
MHF 5-5 harness OD=0.64mm L=50mm	<a href="#">8-25-0432</a>	<a href="#">Buy from Digikey</a>
MHF 5-5 harness OD=0.64mm L=100mm	<a href="#">8-21-0045</a>	<a href="#">Buy from Digikey</a>
MHF 5-5 harness OD=0.64mm L=200mm	<a href="#">8-25-0433</a>	<a href="#">Buy from Digikey</a>
MHF 5-5 harness OD=0.81mm L=100mm	<a href="#">8-25-0869</a>	<a href="#">Contact us</a>
MHF 5-5 harness OD=0.81mm L=200mm	<a href="#">8-25-0870</a>	<a href="#">Contact us</a>
MHF 5-5 harness OD=0.81mm L=500mm	<a href="#">8-25-0873</a>	<a href="#">Contact us</a>

Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 5-5 harness OD=0.48mm L=100mm 180 degree orientation	<a href="#">8-25-0984</a>	<a href="#">Contact us</a>
MHF 5-5 harness OD=0.48mm L=200mm 180 degree orientation	<a href="#">8-25-0985</a>	<a href="#">Contact us</a>
MHF 5-5 harness OD=0.64mm L=100mm 180 degree orientation	<a href="#">8-25-0878</a>	<a href="#">Contact us</a>
MHF 5-5 harness OD=0.64mm L=200mm 180 degree orientation	<a href="#">8-25-0879</a>	<a href="#">Contact us</a>
MHF 5-5 harness OD=0.81mm L=100mm 180 degree orientation	<a href="#">8-25-0896</a>	<a href="#">Contact us</a>
MHF 5-5 harness OD=0.81mm L=200mm 180 degree orientation	<a href="#">8-25-0897</a>	<a href="#">Contact us</a>

# MHF® 5L standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.

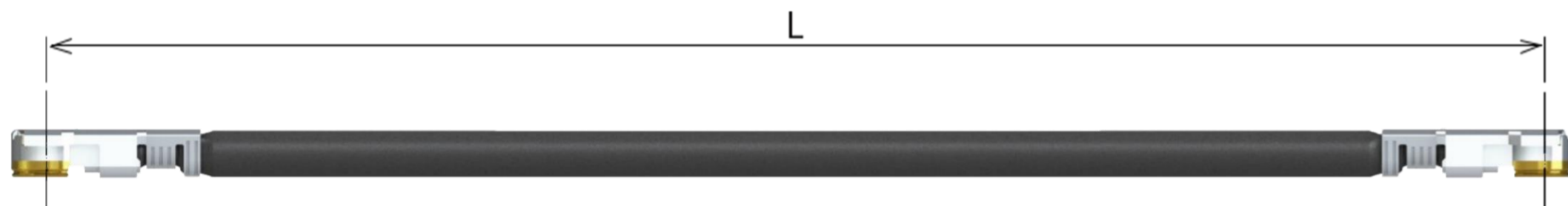


Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 5L-5L harness OD=0.81mm L=100mm	<a href="#">8-25-0929</a>	<a href="#">Contact us</a>
MHF 5L-5L harness OD=0.81mm L=200mm	<a href="#">8-25-0930</a>	<a href="#">Contact us</a>
MHF 5L-5L harness OD=0.81mm L=500mm	<a href="#">8-25-0933</a>	<a href="#">Contact us</a>
MHF 5L-5L harness OD=1.13mm L=50mm	<a href="#">8-24-0146</a>	<a href="#">Buy from Digikey</a>
MHF 5L-5L harness OD=1.13mm L=100mm	<a href="#">8-24-0147</a>	<a href="#">Buy from Digikey</a>
MHF 5L-5L harness OD=1.13mm L=200mm	<a href="#">8-24-0148</a>	<a href="#">Buy from Digikey</a>
MHF 5L-5L harness OD=1.13mm L=500mm	<a href="#">8-24-0149</a>	<a href="#">Contact us</a>

Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 5L-5L harness OD=0.81mm L=100mm 180 degree orientation	<a href="#">8-25-0967</a>	<a href="#">Contact us</a>
MHF 5L-5L harness OD=0.81mm L=200mm 180 degree orientation	<a href="#">8-25-0968</a>	<a href="#">Contact us</a>
MHF 5L-5L harness OD=1.13mm L=100mm 180 degree orientation	<a href="#">8-25-0907</a>	<a href="#">Contact us</a>
MHF 5L-5L harness OD=1.13mm L=200mm 180 degree orientation	<a href="#">8-25-0908</a>	<a href="#">Contact us</a>

# MHF® 7S standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.



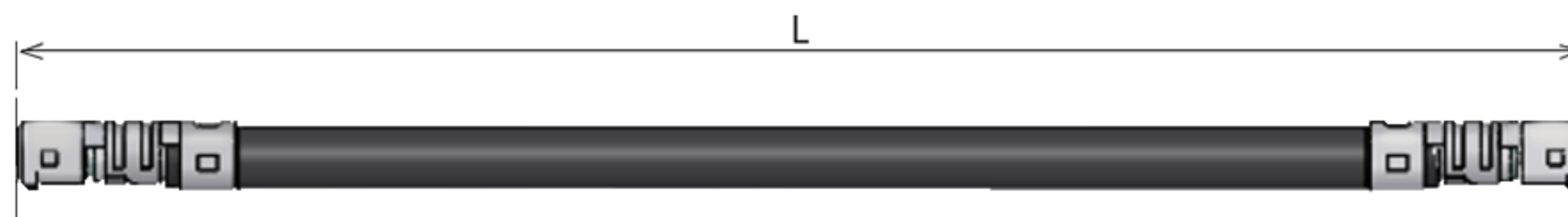
Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 7S-7S harness OD=1.13mm L=50mm	<a href="#">8-24-0162</a>	<a href="#">Contact us</a>
MHF 7S-7S harness OD=1.13mm L=100mm	<a href="#">8-22-0127</a>	<a href="#">Buy from Digikey</a>
MHF 7S-7S harness OD=1.13mm L=150mm	<a href="#">8-23-0117</a>	<a href="#">Buy from Digikey</a>
MHF 7S-7S harness OD=1.13mm L=200mm	<a href="#">8-21-0046</a>	<a href="#">Buy from Digikey</a>
MHF 7S-7S harness OD=1.13mm L=500mm	<a href="#">8-24-0163</a>	<a href="#">Contact us</a>



Part Number Description	Part Number (Link to Drawing)	Sample available
MHF 7S-7S harness OD=1.13mm L=100mm 180 degree orientation	<a href="#">8-25-0941</a>	<a href="#">Contact us</a>
MHF 7S-7S harness OD=1.13mm L=200mm 180 degree orientation	<a href="#">8-25-0943</a>	<a href="#">Contact us</a>

# MHF® -TI standard harness

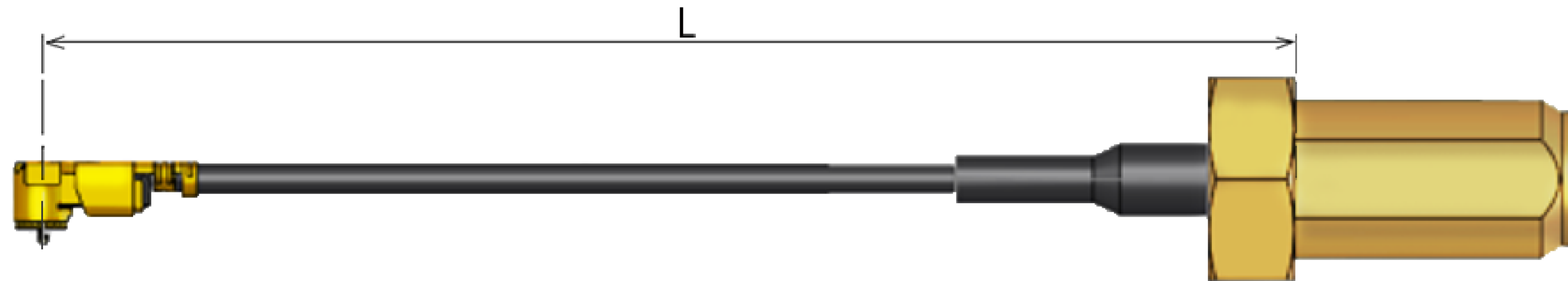
- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.



Part Number Description	Part Number (Link to Drawing)	Sample available
MHF-TI-TI harness OD=2.80mm L=500mm	<a href="#">8-24-0161</a>	<a href="#">Contact us</a>
MHF-TI-TI harness OD=2.80mm L=1,000mm	<a href="#">8-25-0153</a>	<a href="#">Buy from Digikey</a>
MHF-TI-TI harness OD=3.00mm L=500mm	<a href="#">8-24-0238</a>	<a href="#">Contact us</a>
MHF-TI-TI harness OD=3.00mm L=1,000mm	<a href="#">8-25-0154</a>	<a href="#">Buy from Digikey</a>

# MHF <sup>®</sup> -SW23 PLUG standard harness

- ◆ Please click the part number to get its 2D drawing.
- ◆ Please be advised that if it becomes necessary to change the harness specifications, the part number will also need to be updated. The following part number is valid only when used with the harness specifications shown below.
- ◆ Please contact us via [Inquiry form](#) for other harness specifications.



Part Number Description	Part Number (Link to Drawing)	Sample available
MHF-SW23-SMA Jack harness OD=1.13mm L=100mm	<a href="#">8-25-0540</a>	<a href="#">Contact us</a>
MHF-SW23-SMA Jack harness OD=1.13mm L=150mm	<a href="#">8-25-0541</a>	<a href="#">Contact us</a>
MHF-SW23-SMA Jack harness OD=1.13mm L=200mm	<a href="#">8-25-0542</a>	<a href="#">Contact us</a>

# I-PEX Product Series



**MHF<sup>®</sup>**  
Series  
RF Connectors



**EVAFLEX<sup>®</sup>**  
Series  
**MINIFLEX<sup>®</sup>**  
Series  
FPC/FFC Connectors



**AP**  
Series  
Terminals



**CABLINER<sup>®</sup>**  
Series  
Micro-Coaxial/  
Twinaxial  
Connectors



**ISH<sup>®</sup>**  
Series  
**IARPB<sup>®</sup>**  
Series  
Wire-to-Board  
Connectors



**MINIDOCK<sup>™</sup>**  
Series  
I/O Connectors



**NOVASTACK<sup>®</sup>**  
Series  
Board-to-Board  
Connectors

 Please [contact us](#) for custom products.



I-PEX, MHF, CABLINE, NOVASTACK, ISH, IARPB, MINIFLEX, EVAFLEX, MINIDOCK, i-Fit and ZenShield are registered trademarks of I-PEX Inc. Please note that the contents in the catalog might be changed without prior notification. I-PEX Inc. assumes no responsibility for any inaccuracies or obligation to update Information on these documents. Please be sure to read and understand the latest "Precautions for Use" and "Instruction Manual" before you use our products. We shall not be responsible for any defects, damages or troubles in case you use our products without following the precautions for use. Please feel free to contact our sales representatives when you use our products for any applications that require very high reliability and safety, or that relate to human life (ex. nuclear power control, aerospace, transportation, medical equipment, safety equipment etc.).

Contact your sales representative for more detailed information. [ [i-pex.com](http://i-pex.com) ]