



MHF[®] 5

Miniature RF Coaxial Connector

MHF[®] 5 : Specifications

Very low profile Connector, only 1.0mm above PCB

Applicable based on market trend of lower profile connector

Application : Smart device, Wearable Device, Smartphone, Tablet, etc.



MHF[®] 5

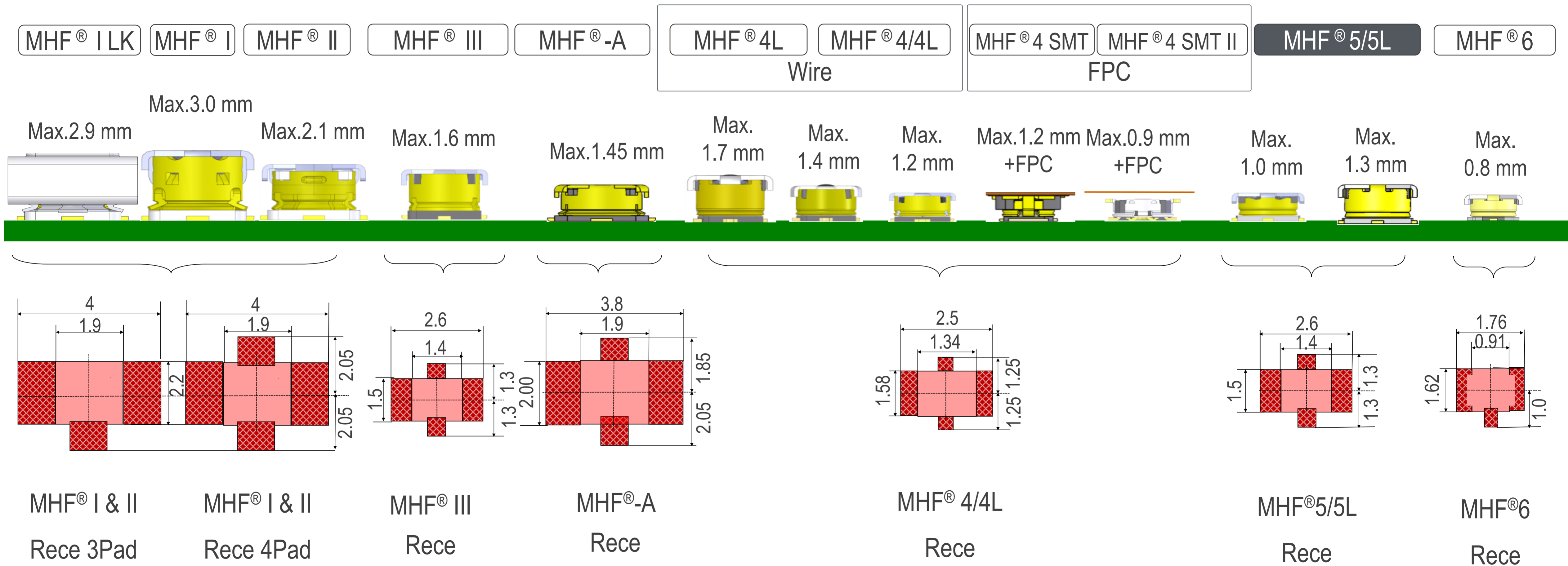
■ Name	MHF [®] 5
■ Mating type	Right angle vertical mating type
■ Mating Height	1.0 mm max.
■ Width	2.0 mm
■ Length	0.81: 3.24 mm 0.48: 3.41 mm
■ V.S.W.R.	DC~3 GHz = 1.3 3~6 GHz = 1.5
■ Wire	AWG# 36 (0.81 mm O.D.) AWG# 36 (0.64 mm O.D.) AWG# 38 (0.48 mm O.D.)
■ Applicable Technology	Mobile communication, Wi-Fi [®] , Bluetooth [®] , GPS, LPWA, etc.

MHF[®] 5 : Features

1. Super low profile
2. Applicable Wire
3. Wire termination by “i-Fit[®]” technology
4. i-Fit[®] Advantage (V.S.W.R.)
5. Wire harness supply is available

1. Super low profile

Super low profile connector



2. Applicable Wire

Wire Chart

	MHF® Series (Profile)	MHF® I (3.0 mm max.)	MHF® I (2.5 mm max.) (2.9 mm max. with MHF I LK)	MHF® II (2.1 mm max.)	MHF® III (1.6 mm max.)	MHF-A® 13 (1.45 mm max.)	MHF® 4 (1.2 mm max.)	MHF® 4L See below "()"	MHF® 5 (1.0 mm max.)	MHF® 5L (1.3 mm max.)	MHF® 6 (0.8 mm max.)
Coax O.D. (Center Conductor AWG)	2.00 mm (26)	○									
	1.80 mm (30)		○								
	1.37 mm (30)		○								
	1.32 mm (32)		○								
	1.13 mm (32)		○			○		○ (H=1.4 mm)		○	
	0.95 mm (33)			○				○ (H=1.4 mm)			
	0.81 mm (33)									○	
	0.81 mm (36)		○	○	○	○	○	○ (H=1.2 mm)	○		
	0.64 mm (36)					○		○ (H=1.2 mm)	○		○
	0.48 mm (38)								○		○
FPC							○				

Coax O.D.(Center Conductor AWG)	Attenuation/m 2.4 GHz *	Attenuation/m 5.8 GHz *
0.64 mm (36)	4.1 dB/m	6.8 dB/m
0.81 mm (36)	4.9 dB/m	8.5 dB/m
0.95 mm (33)	2.8 dB/m	4.4 dB/m
1.13 mm (32)	3.3 dB/m	5.3 dB/m
1.32 mm (32)	3.4 dB/m	5.5 dB/m
1.37 mm (30)	2.6 dB/m	4.3 dB/m
1.80 mm (30)	3.0 dB/m	4.7 dB/m
2.00 mm (26)	2.5 dB/m	4.0 dB/m

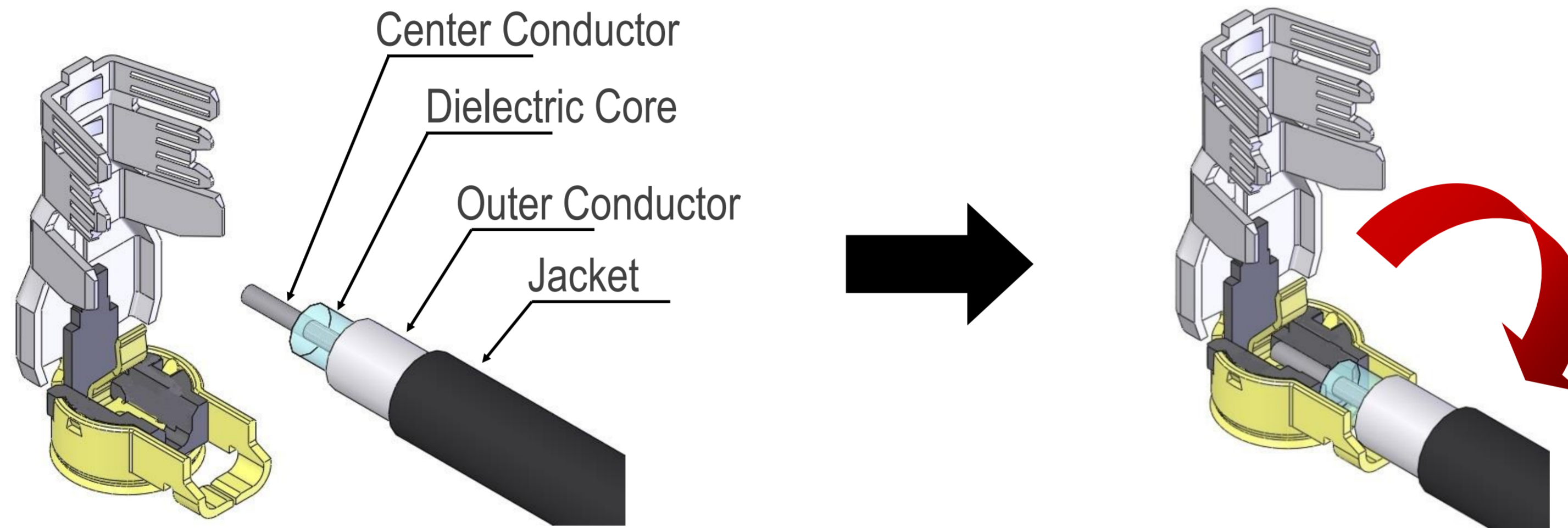
*Reference

3. Wire termination by “i-Fit[®]” technology

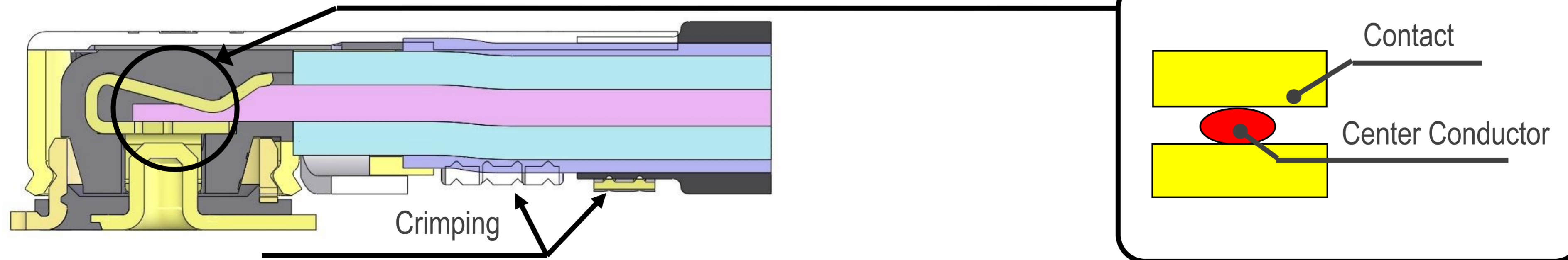
Patent technology

i-Fit[®] Technology

Single operation **without using soldering method.** profit i-Fit[®] offers consistently tight range of performance.

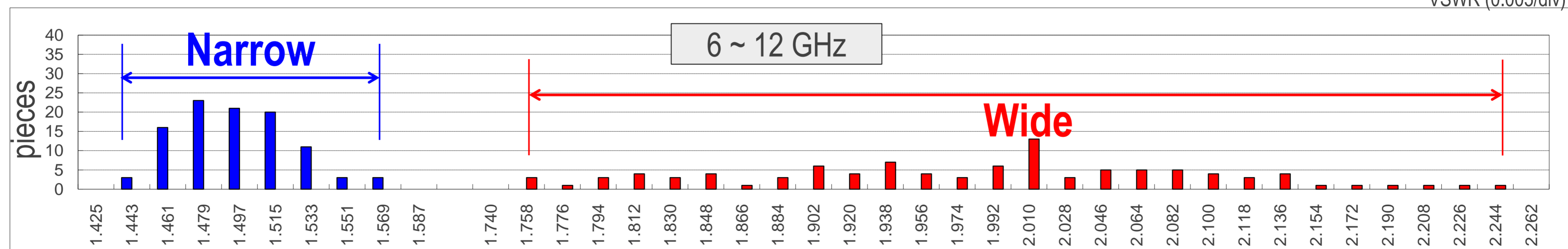
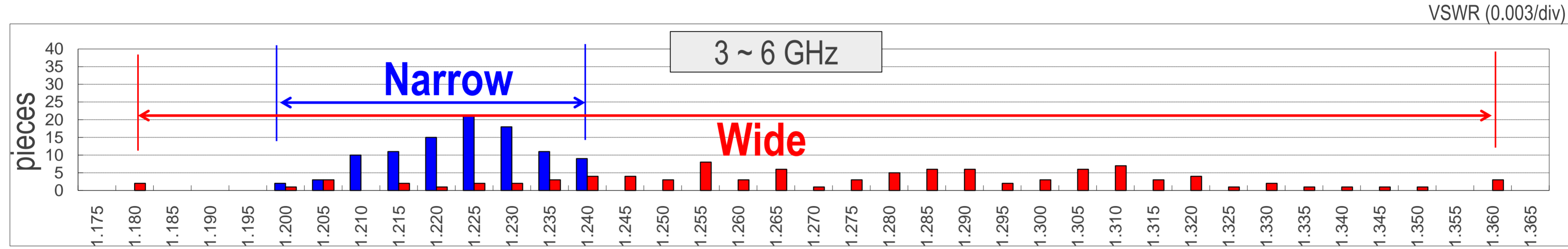
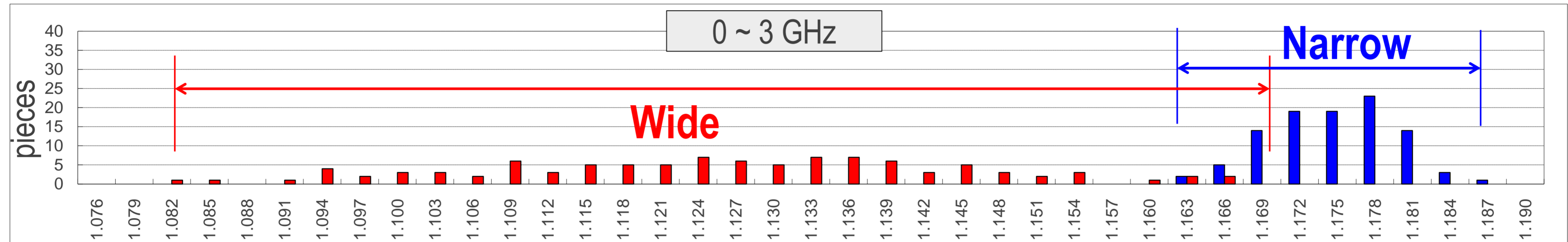
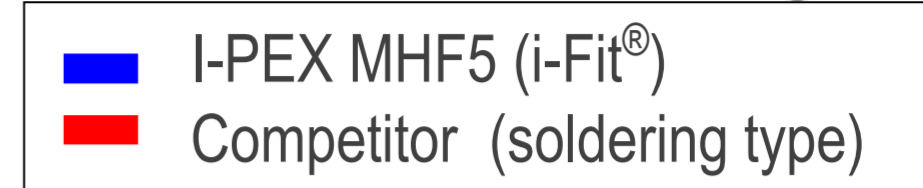


i-Fit[®] Cross Section



4. Solder-less crimp “i-Fit[®]” advantage versus soldering types

i-Fit[®] offers consistently tight range of performance

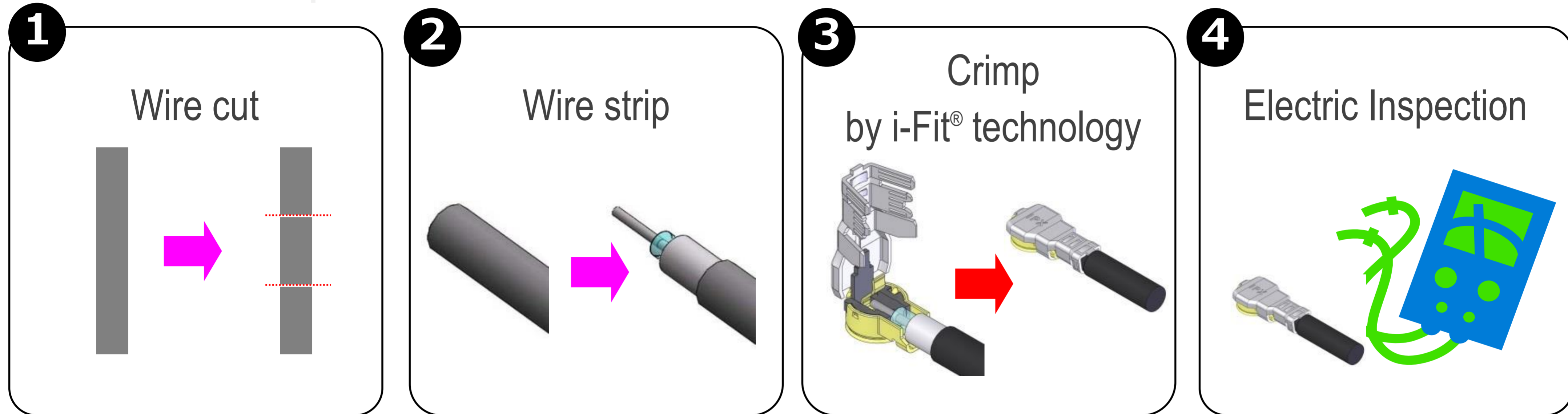


VSWR S11 Histogram

5. Wire harness supply

We can only provide wire harness for this product.

Wire harness process



Fully Automated Process



Summary

- ✓ Super low profile 1.0 mm Max.
- ✓ Wire termination by “i-Fit[®]” technology
- ✓ Wire harness supply is available



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www.i-pex.com

Appendix-1. MHF[®] 5 : Specifications

■ Frequency Range	DC-6 GHz
■ V.S.W.R.	1.3 at ~3 GHz, 1.5 at 3~6 GHz 1.6 at 6~9 GHz, 1.8 at 9~12 GHz
■ Characteristic Impedance	50 ohm +/- 2 ohm
■ Operating Temperature	-40 °C ~ 90 °C
■ Rated voltage	AC 60 V rms
■ Contact Resistance	Signal = 20 m ohm max (Initial) Ground = 20 m ohm max (Initial)
■ Dielectric Withstanding Voltage	200 V / minute (No breakage)
■ Insulation Resistance	500 M ohm min. (Initial)
■ Durability cycles	30 cycles

Appendix-2. Accessory

90543-0001



SMA Adaptor for Plug (with Lock)
for inspection use

90543-0002



SMA Adaptor for Receptacle (with Lock)
for inspection use

90586-0001



Inspection Probe for Plug (no Lock)
Short Circuit & Withstand voltage check

90612-0001



Mating JIG



High-Cycle SMA for Receptacle
With spring function
(Separation type)

90684-0001



High-Cycle SMA for Receptacle
Common Spring function part

90690-0001



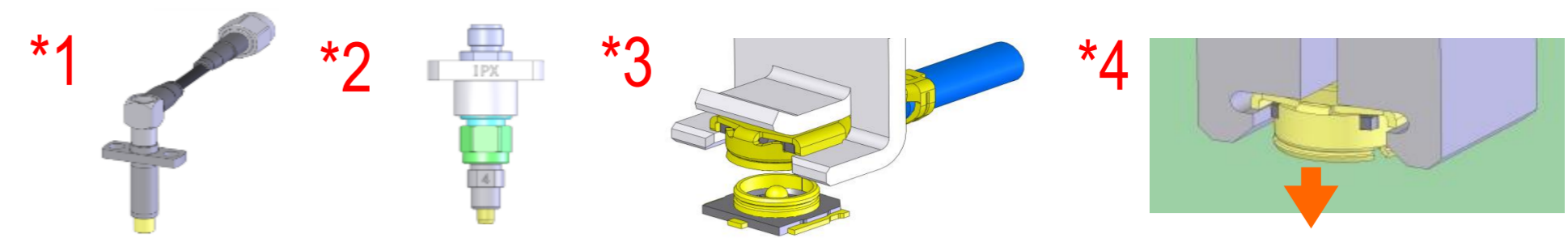
High-Cycle SMA for Receptacle
Changeable part

90624-0001



Un-mating JIG

Appendix-3. Accessory overview

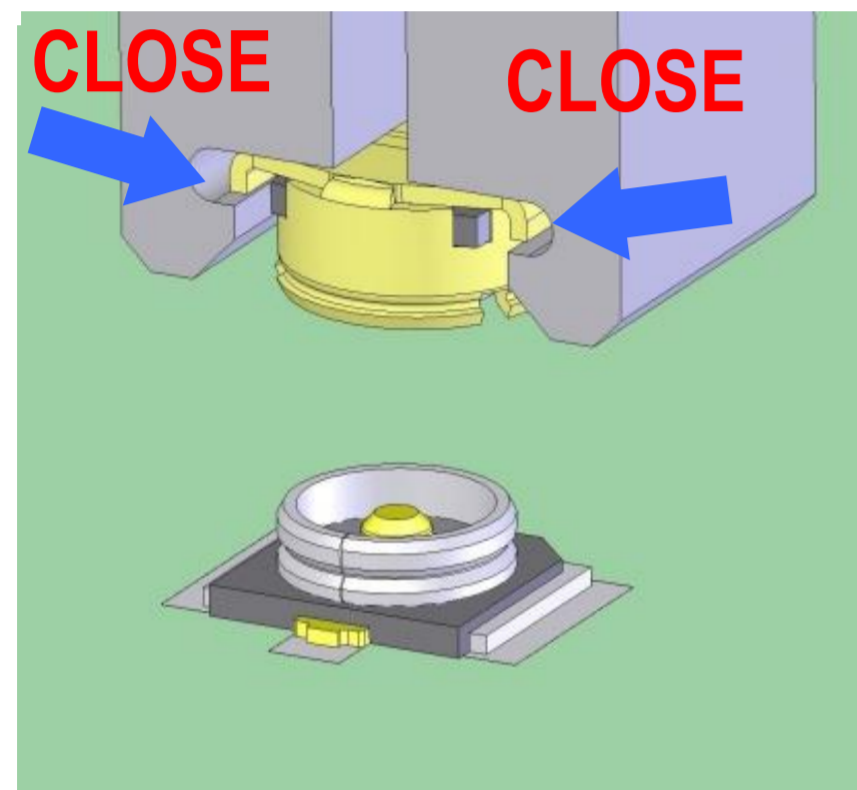


Product			MHF® I	MHF® II	MHF® III	MHF®-A	MHF® 4 SMT	MHF® 4	MHF® 4L	MHF® 5		
SMA adaptor	for Plug	Durability (cycles)		*								
		for electrical performance check	3K		90193-001	90285-001	90413-001	-	90449-001	90543-0001		
		for voltage check	10K		90194-001	90286-001	-	-	90449-003-01	90586-0001		
	for Receptacle	for electrical performance check		500		90193-002	90285-002	90413-002	-	90449-002	90543-0002	
		High cycle	Normal		10K		90539-001	90491-001	90539-001	90698-0001		90793-0001
			Narrow pitch	Wire	100	*1	90577-0100 (100mm) 90577-0350 (350mm)	-	90577-0100 90577-0350	90577-0100 (100mm) 90577-0350 (350mm)		
		Probe		10K	Wire Probe	90575-0001	-	90575-0001	90576-0001		90847-0001	
		Detachable	Base	200K	*2	90684-0001						
			Probe	10K	Base Probe	90416-001	-	90416-001	90683-0001		90690-0001	
		Hand tool	Push / Pull JIG		*3	90224-001 90885-0001 (for 20767-001R)	-	-	-	90435-001	90609-0001 (for 20572-001R-08) 90609-0001 (for 20565-001R-13) 90873-0001 (for 20632-001R-37)	90612-0001
Pull JIG				90192-001	90192-001	90287-001	90411-001	-	-	-		
Push JIG				-	-	-	-	-	-	90624-0001		
Tweezers type JIG			*4	-	-	90501-001	-	-	90482-001	90616-0008 90615-0013	-	

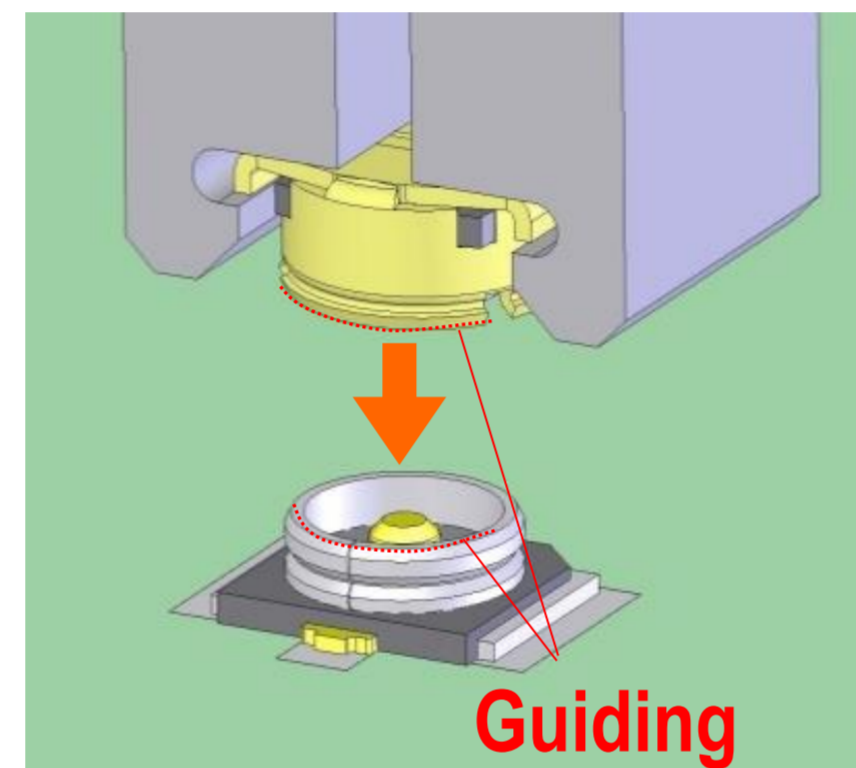
Appendix-4.MHF[®] 5 Mating / Un-Mating Jig usage

Mating

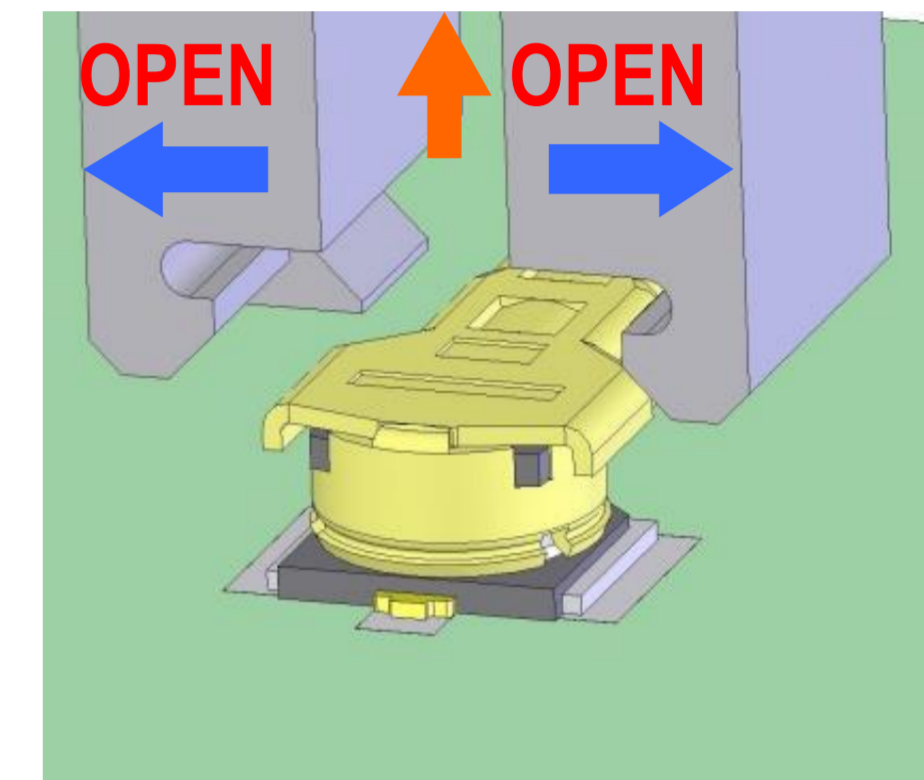
STEP1
Hold the Connector



STEP2
Push vertically

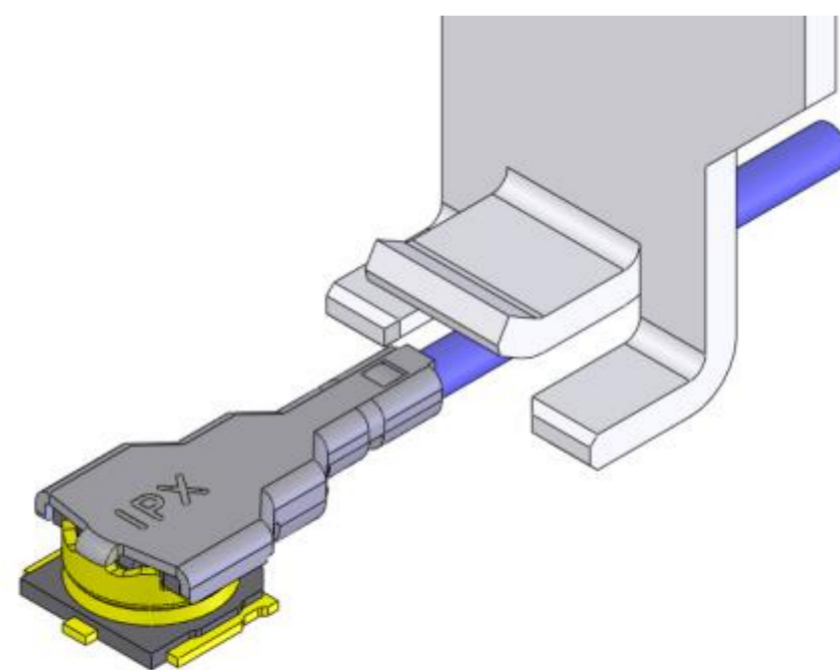


STEP3
Release



Un-Mating

STEP1
Hold the connector



STEP2
Pull Vertically

