

# MHF<sup>®</sup> 4 Connector

Part No.20448-001R-081, 20611-001R, 20449-001E, 20449-001E-\*\*, 20449-001E-\*\*\*

## Instruction Manual

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7	S18599	September 19, 2018	Y.Imaji	K.Yufu	K.Yotsutani
6	S18033	January 17, 2018	M.Nomoto	S.Taguchi	K.Yotsutani
5	S17477	June 26, 2017	M.Nomoto	S.Taguchi	K.Yotsutani
Rev.	ECN	Date	Prepared by	Checked by	Approved by

This manual is to explain the insertion & withdrawal methods and important points in handling of MHF 4 connector PLUG with cable for the purpose of proper use.

## 【Connector Parts Number】

MHF 4 PLUG            20448-001R-081, 20611-001R  
 MHF 4 RECEPTACLE   20449-001E, 20449-001E-\*\*, 20449-001E-\*\*\*

## 【Pushing & Pulling JIG】

To avoid excessive stress to cable connection points, it is recommended to use special jig as show in Fig. 1.  
 The cable connector has a design feature to hook this “Pushing & Pulling JIG”. (See Fig. 2)

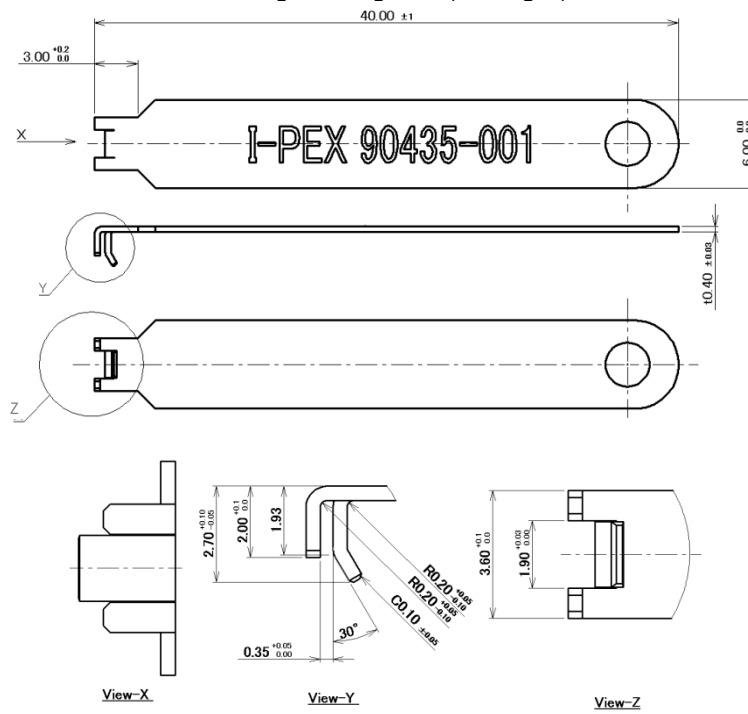


Fig. 1 Recommendation: Pushing & Pulling JIG Part No. 90435-001

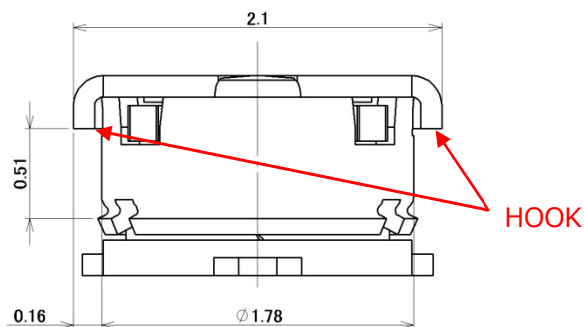


Fig. 2 PLUG connector design feature to hook pull jig

## 【CONNECTOR INSERTION MANUAL】

### 1. In case of mating by hand

#### ① How to hold a cable connector

Hold the cable connector as show in Fig. 3.

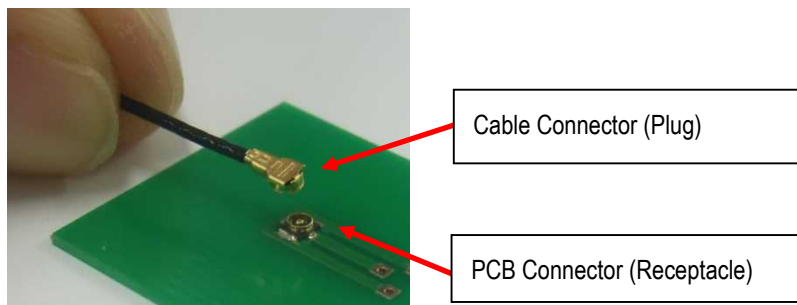


Fig. 3 How to hold a cable connector

#### ② Direction to mate

Set connectors of the board side and of the cable side as shown in Fig. 4.

Please check they are set firmly by moving back and forth slightly.

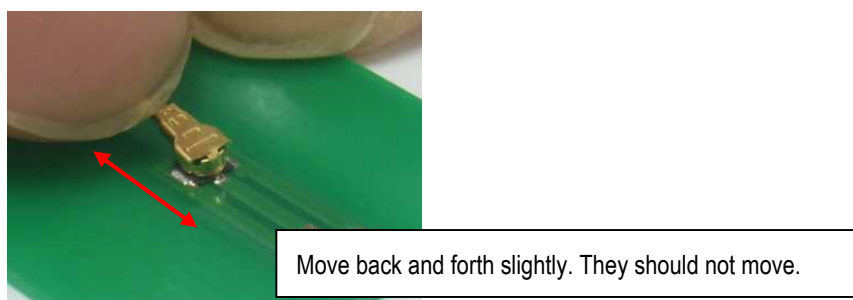


Fig. 4 Direction to mate

#### ③ How to mate

Push cable connector at its center location vertically as show in Fig. 5. When click sound can be heard, "the connector mating action is complete".

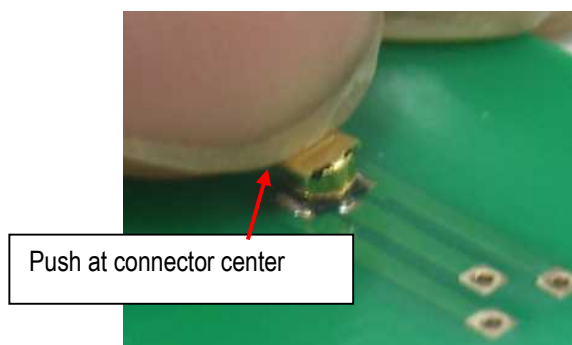


Fig. 5 How to mate

## 2. In case of mating by Pushing & Pulling JIG

- ① Slide the "Pushing & Pulling JIG" from the direction of drawing out of a cable and attach to the cable connector. (See Fig. 6-a)
- ② The jig must be moved until it reaches a stopper just as it holds the cable connector. (See Fig. 6-b)
- ③ Push the jig vertically to the PCB surface (PCB Connector). (See Fig. 6-c)

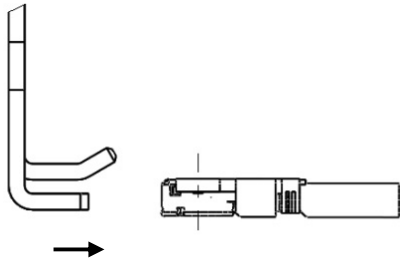


Fig. 6-a Slide the jig

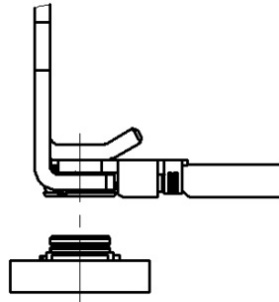


Fig. 6-b Hold the cable connector

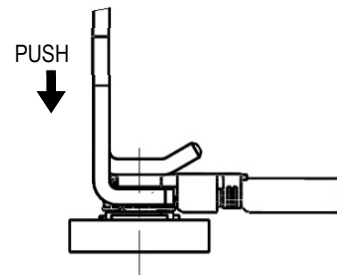


Fig. 6-c Push the jig

### CAUTION

Please make sure to set the cable side connector parallel to the board.

If you mate in not parallel condition as shown in Fig. 8, connector will be damaged.

Correct connector mating  
Parallel <Allowed>

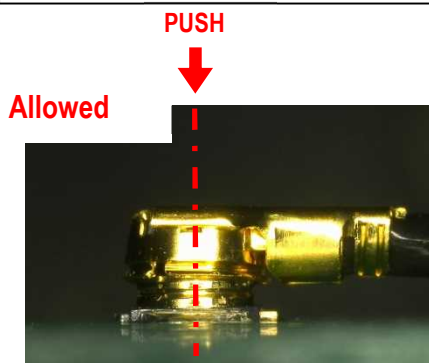


Fig. 7 Plug parallels to test board (Preferable)

Wrong connector mating  
Not parallel <Prohibited>

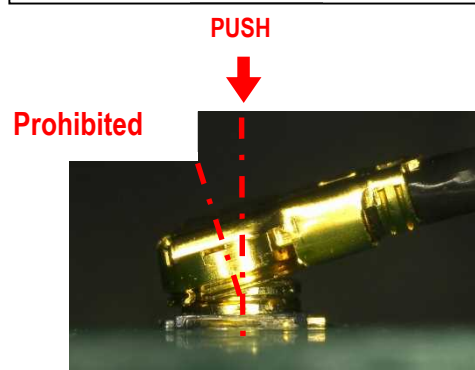


Fig. 8 Plug does not parallel to test board (Not allowed)

## 【How to withdraw cable connector】

### 1. In case of unmating by hand

You must lift it up vertically by holding the hook area which is located at both connector ends. (See Fig. 9)

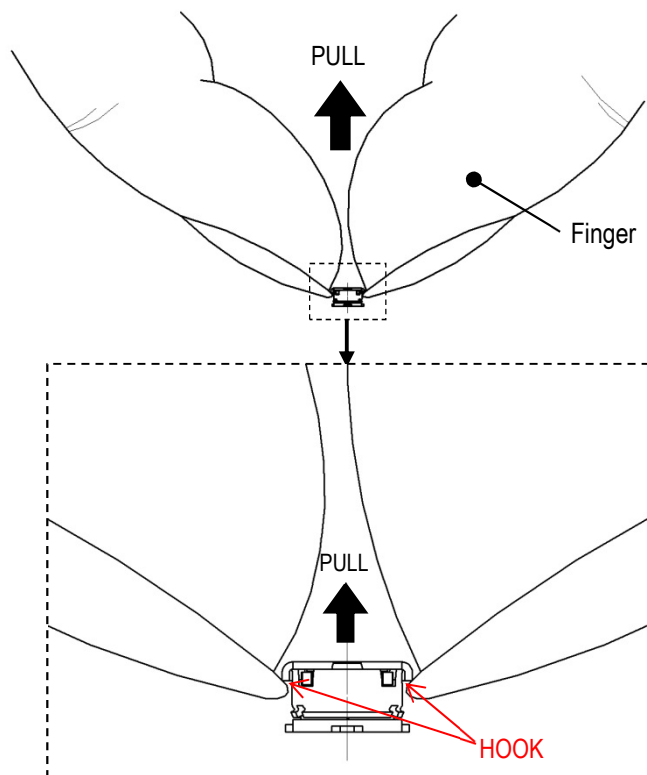


Fig. 9 How to hook and pull connector by hand

### CAUTION

Connector must be lifted up vertically to PCB surface. (See Fig. 10)

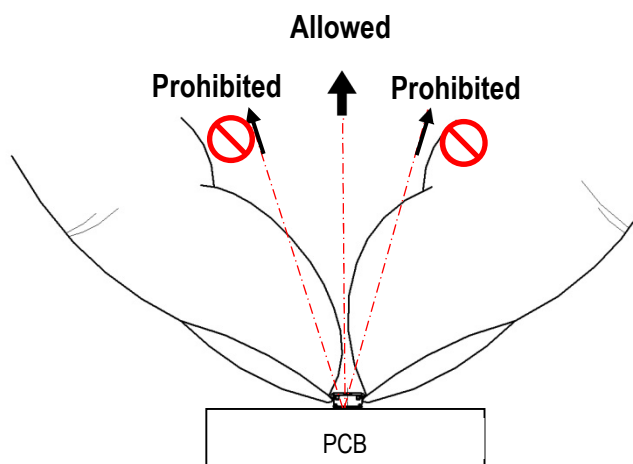


Fig. 10 How to lift up the connector by hand

## 2. In case of unmating by Pushing & Pulling JIG

- ① Slide the "Pushing & Pulling JIG" from the direction of drawing out of a cable and attach to the cable connector. (See Fig. 11-a)
- ② The jig must be moved until it reach a stopper just as it hold the cable connector. (See Fig. 11-b)
- ③ Lift up the jig vertically to the PCB surface. (See Fig. 11-c)

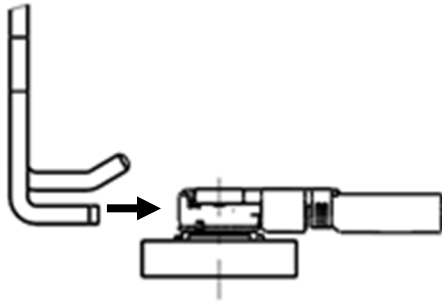


Fig. 11-a Slide the jig

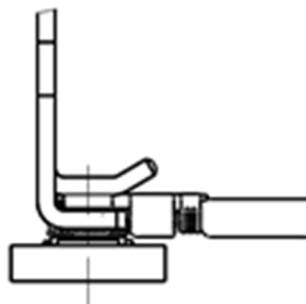


Fig. 11-b Hold the cable connector

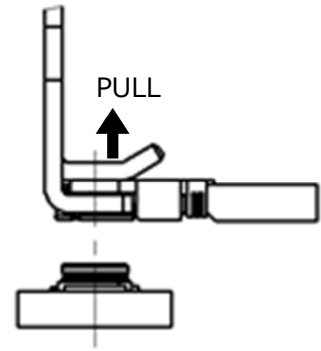


Fig. 11-c Pull the jig

### CAUTION

"Pushing & Pulling JIG" must be lifted up vertically to PCB surface. (See Fig. 12)

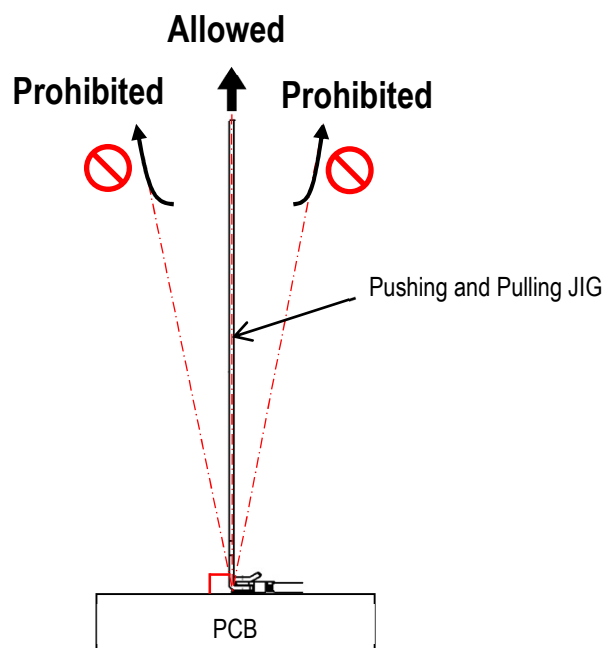


Fig. 12 How to lift up the connector by Pushing and Pulling JIG

## [CAUTION IN CABLE CONNECTOR HANDLING]

In the case of Fig. 13, it has possibility to damage to the housing and come off from receptacle connector. Especially when operator give continuous force to the direction(red allow), the tendency become higher. So please take care of handling of harness.

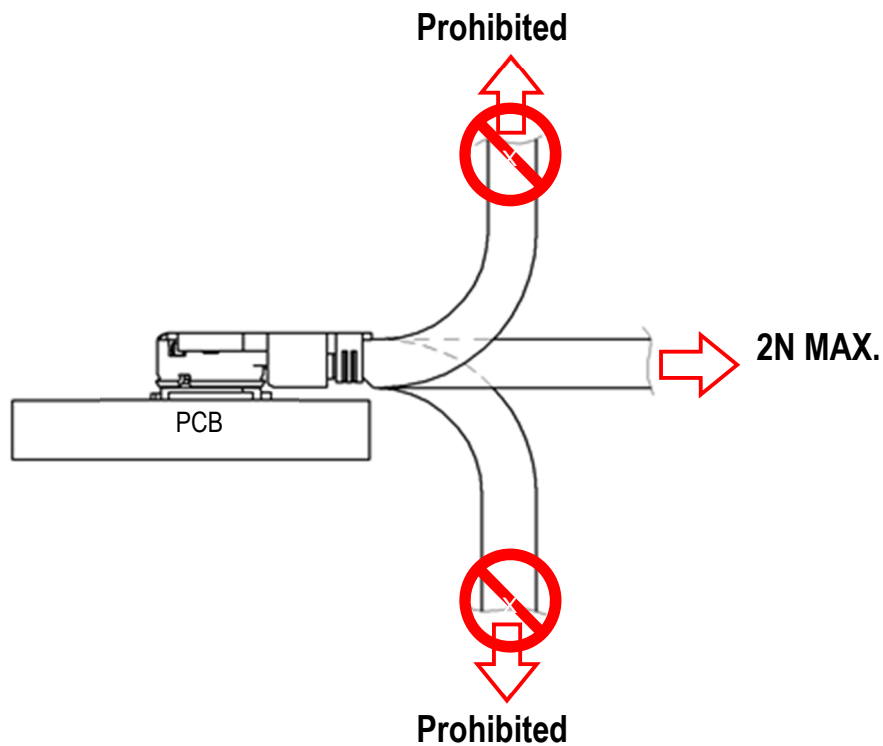


Fig. 13 Caution in cable connector handling