MHF®-SW23

Part No.20549-001E, 20549-001E-01

Instruction Manual

Rev.	ECN	Date	Prepared by	Checked by	Approved by
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3	S18423	July 6, 2018	M.Nomoto	K.Yufu	K.Yotsutani
2	S17440	June 13, 2017	M.Nomoto	K.Yufu	K.Yotsutani
1	S17213	March 22, 2017	M.Nomoto	K.Yufu	K.Yotsutani

This MHF-SW23 RF switch instruction manual contains recommended procedures for mount board layouts, insertion and extraction of harness safely.

◆RF Switch
Product Name MHF-SW23
Part No. 20549-001E, 20549-001E-01

◆ Harness
Product Name MHF-SW23 SMA ADAPTER CABLE
Part No. 90582-0*00

【Parts names of the connector】

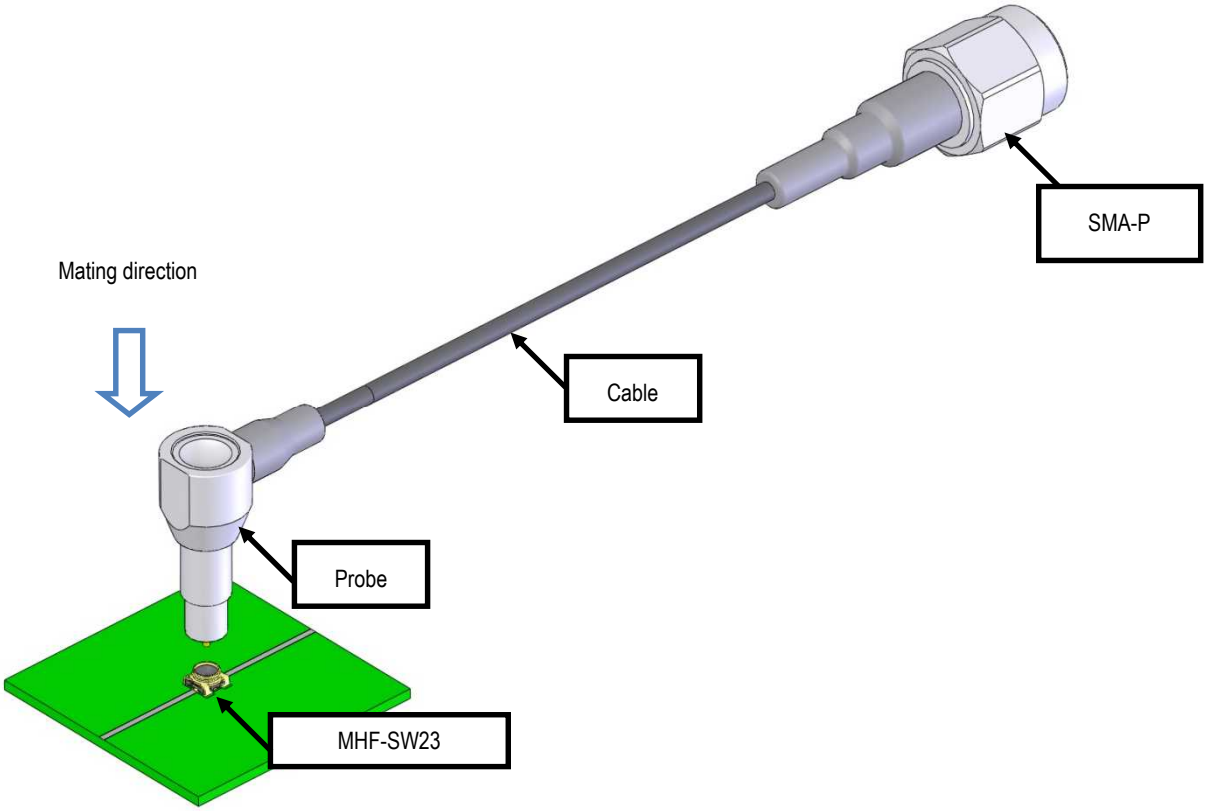


Fig. 1 Parts names of the connector

【PCB Layout Guidelines】

Follow the below guidelines to mount MHF-SW23. Refer to Fig. 2 and Fig. 3.

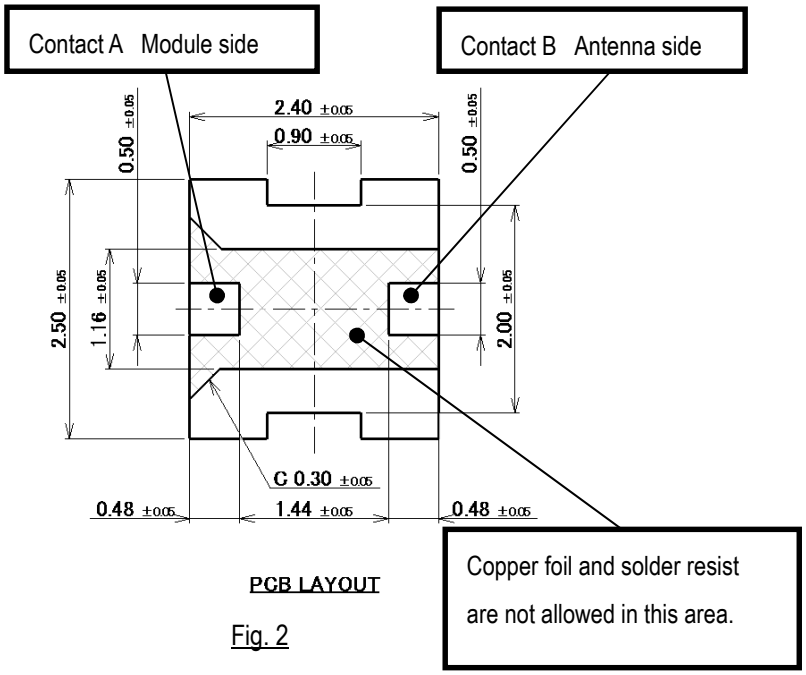


Fig. 2

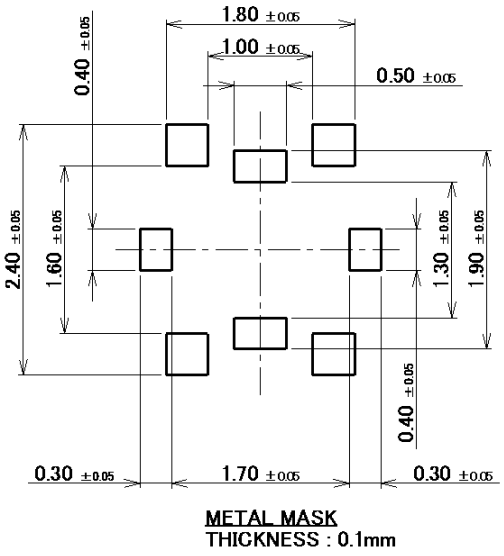
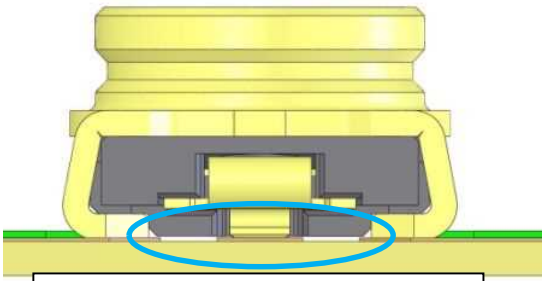


Fig. 3

CAUTION

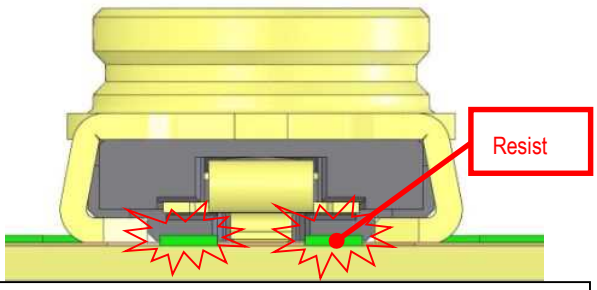
- **To prevent solder wicking and flux oozing, PCB layout and metal mask thickness shown in above figures shall be strictly followed.**
- **If copper foil and solder resist touches the bottom of the connector, it may interfere the housing and cause poor mounting. (Fig. 5)**



Correct condition

Open a space at bottom of the connector.

Fig. 4



Wrong condition

No copper foil and no solder resist at bottom of the connector.

Fig. 5

【MHF-SW23 Guidelines for peripheral components】

Fig. 6 shows guidelines for placing components around MHF-SW23 to avoid interference when a connector is mated to a harness.

A Harness mated to MHF-SW23

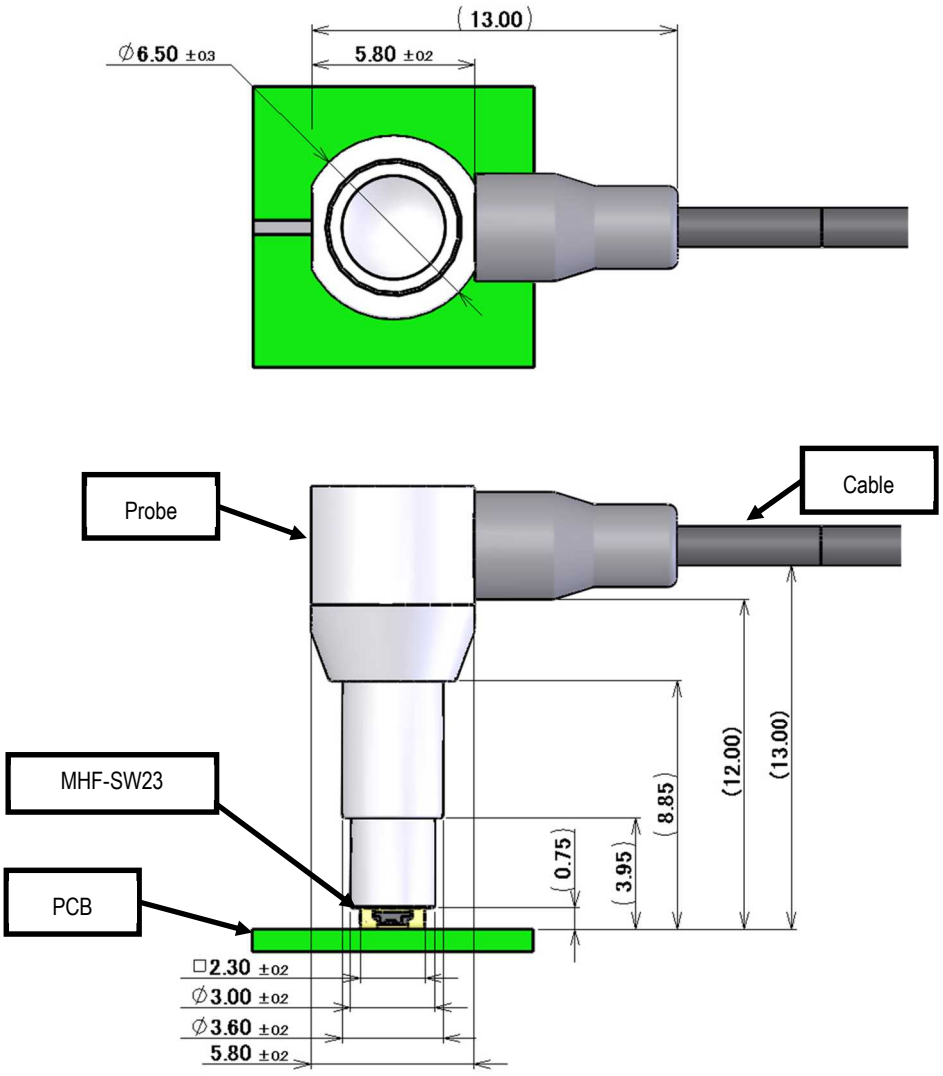


Fig. 6

CAUTION

- **Interference of harness and components during inspections will damage the connector and also prevents the probe to mate completely.**

【Bridge Layout Guidelines】

Bridges shall not be placed near MHF-SW23. (See Fig. 7.)

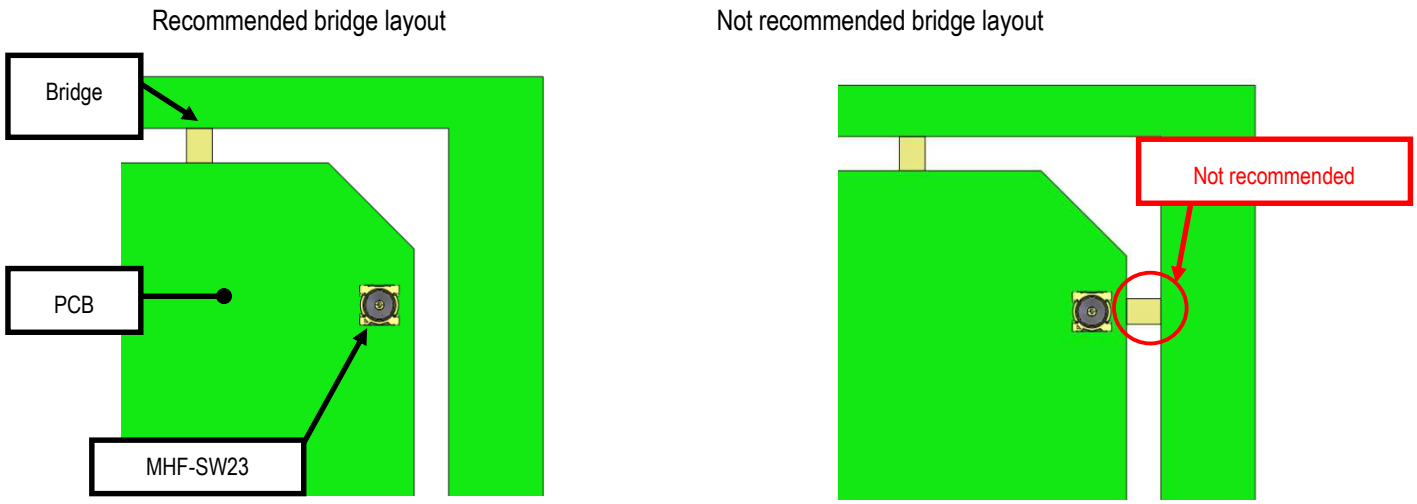


Fig. 7

CAUTION

- **To separate the PCB, cut bridges using router type PCB separator.**

Cutting scraps of the bridges may get inside the connector.

For this reason, bridges are recommended to place away from the MHF-SW23. (Fig. 8)

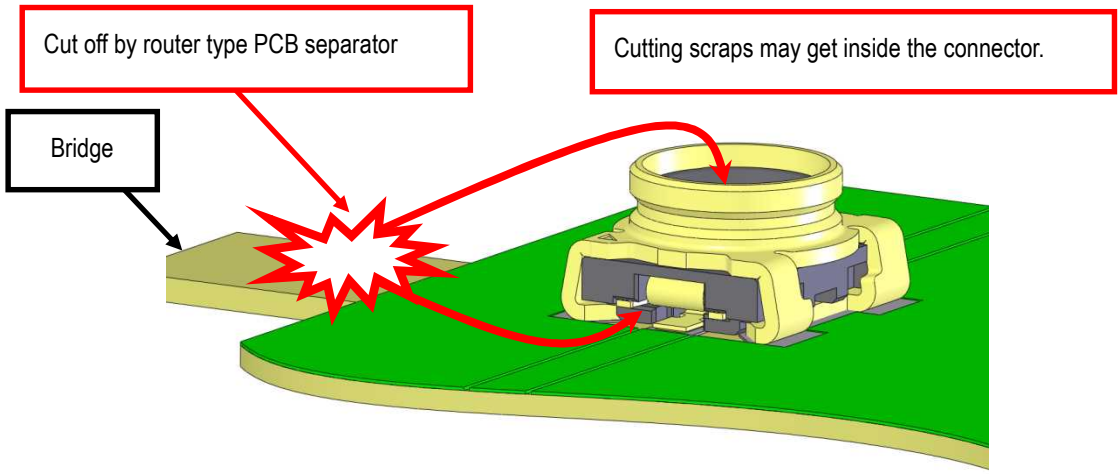


Fig. 8

【How to Fasten SMA-P】

Hold still the SMA-J and screw SMA-P lightly by hand. (Fig. 9)
As shown in Fig. 10, use 0.57Nm torque wrench and wrench to screw SMA-P.

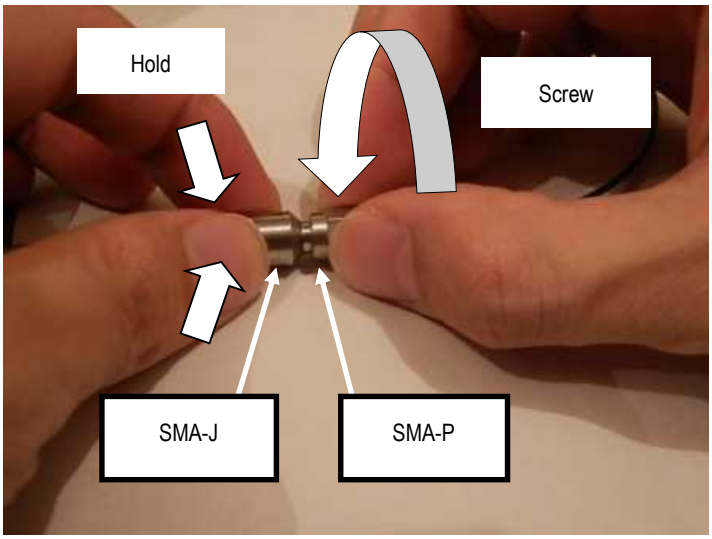


Fig. 9

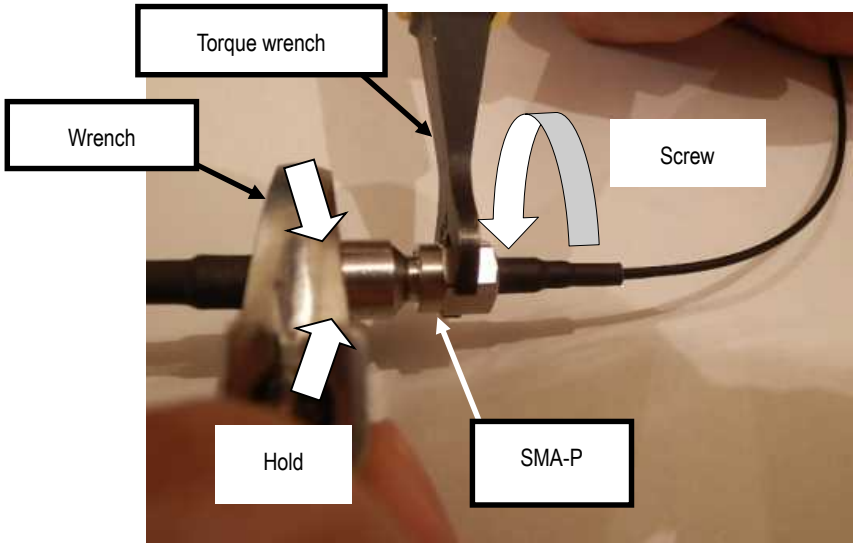


Fig. 10

CAUTION

- **Screw only SMA-P side. Proper torque 0.57 Nm is recommended to fasten SMA-P. Excess torque may cause the breakage of a SMA connector.**

【Inserting Harness】

1. How to Hold a Harness

Hold the probe of harness for inspection as shown in Fig. 11.

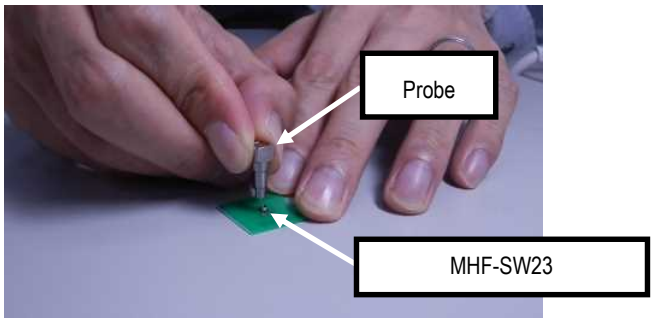


Fig. 11

2. Mating Direction

Mate probe to the RF Switch as shown in Fig. 12.
To confirm the connectors are mated firmly, slightly move the connectors back and forth.

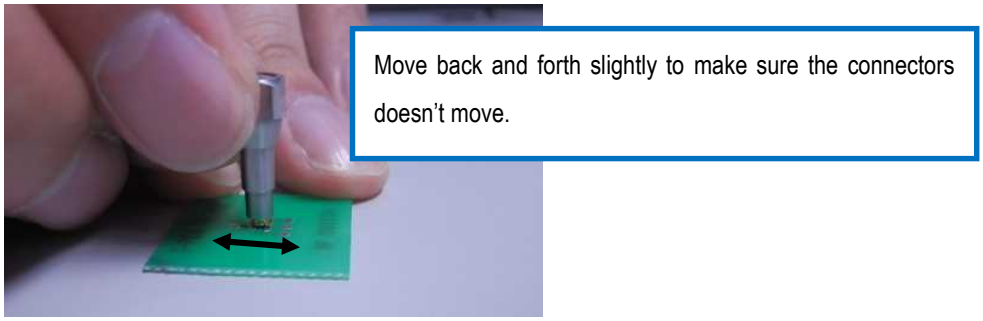


Fig. 12

CAUTION

- **Please make sure to set the probe vertically to the board. Mating tilted probe as shown in Fig. 14, will damages the connectors.**

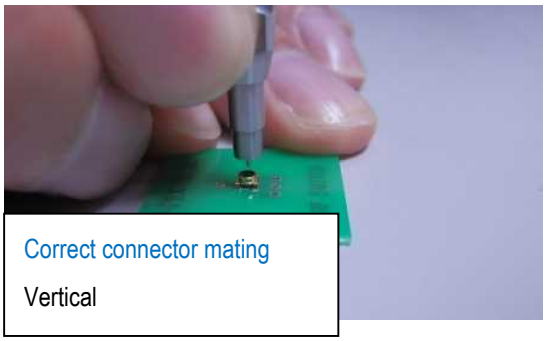


Fig. 13

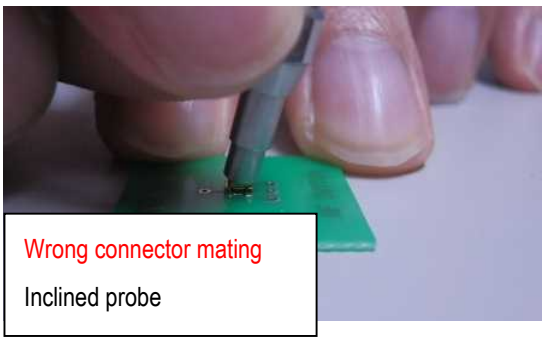


Fig. 14

3. How to mate

As shown in Fig. 15, push down the center of the probe vertically until a click is heard.

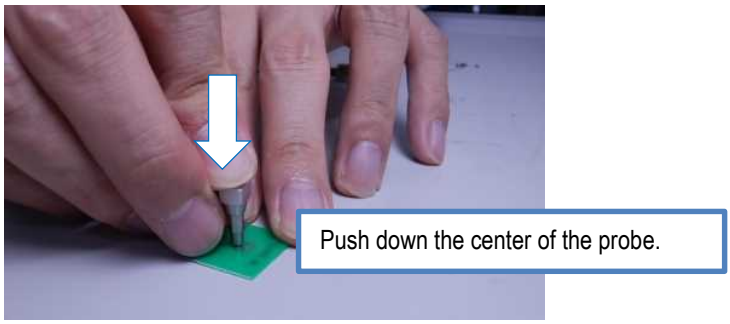


Fig. 15

【How to withdraw Harness】

Withdraw the probe vertically to the PCB surface. (See Fig. 16)

Fig. 16

CAUTION

- **Do not pull the cable to withdraw the harness as shown in Fig. 17.**
  Pulling a cable will damages the harness. Make sure to hold the probe and pull it up vertically.

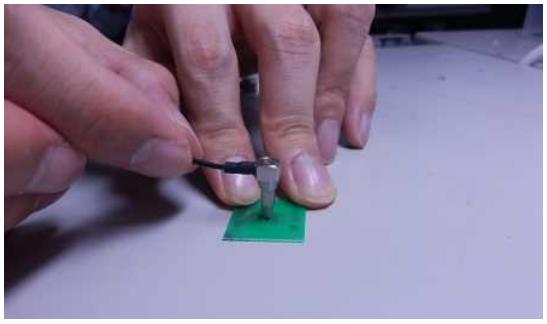


Fig. 17