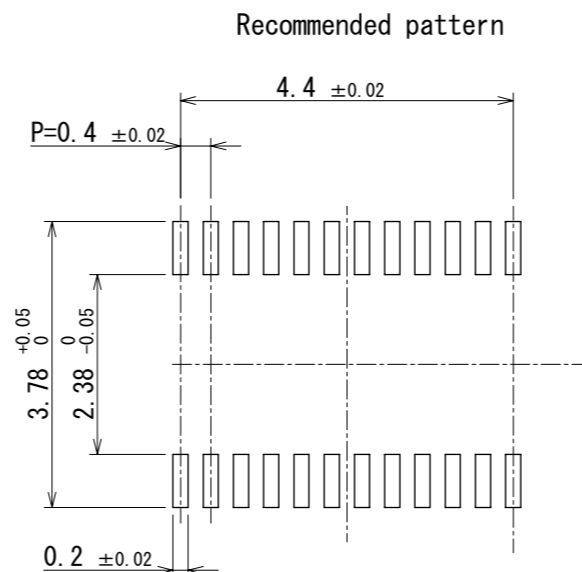
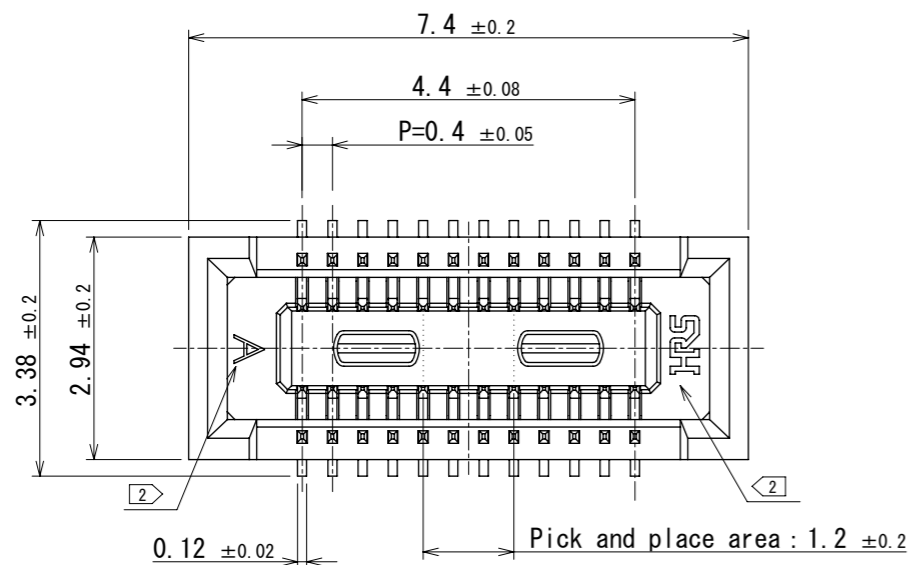
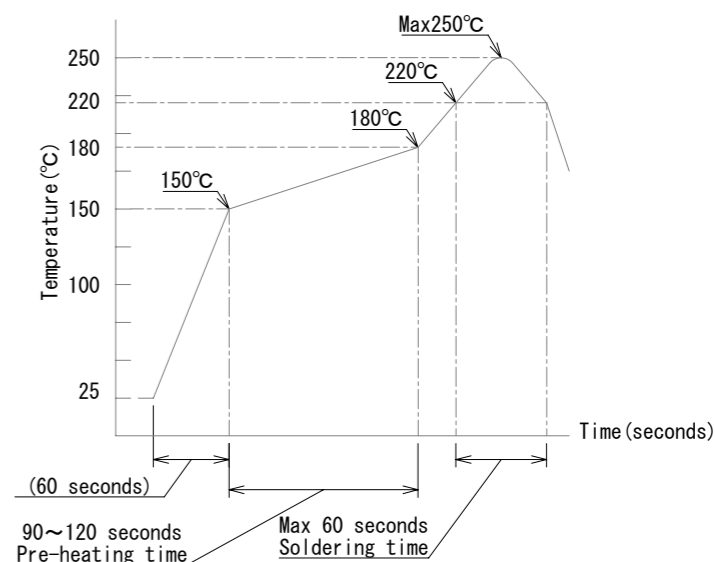


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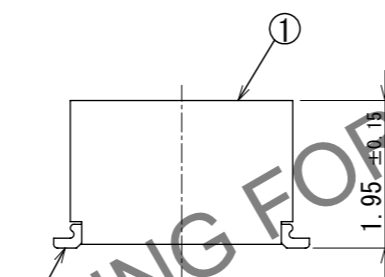
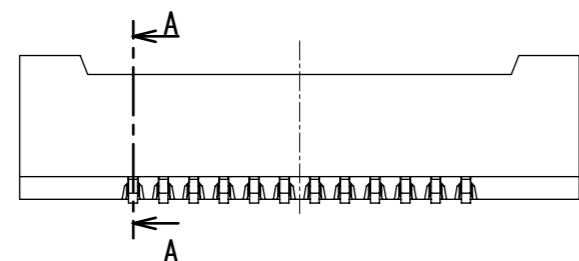


Recommended metal mask thickness : 120μm  
Recommended metal mask opening ratio : 80% for lead pad

4 Recommended reflow temperature profile for lead-free solder.



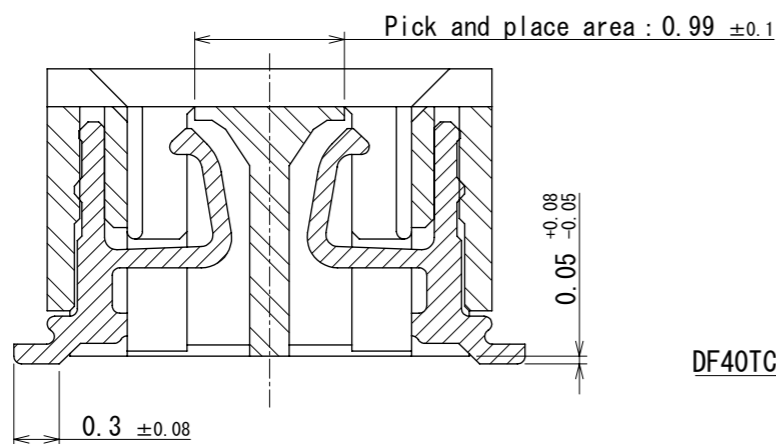
Reflow method : IR reflow  
Number of reflow cycles : 2 cycles max.  
1) Reflow time  
Duration above 220°C, 60 sec max.  
(peak temperature : 250°C max)  
2) Pre-heat time  
Pre-heat temperature (min) : 150°C  
Pre-heat temperature (max) : 180°C  
Pre-heat time : 90-120 sec.



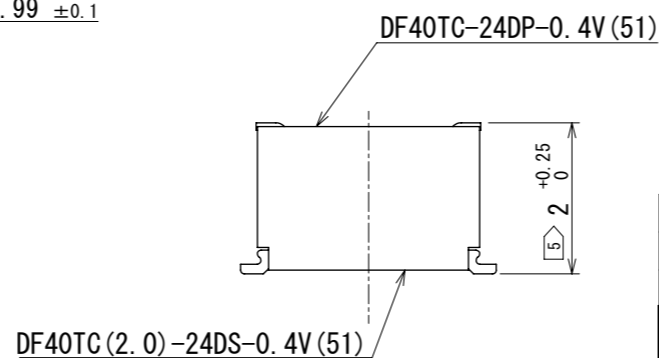
HRS DRAWING FOR REFERENCE

- Note
1. All lead co-planarity will be 0.1mm max.
  2. HRS mark and cavity No. are indicated at approximate location.
  3. Plating specifications  
Contact area : Gold 0.05 μm min  
SMT lead : Gold 0.05 μm min  
Under plating : Nickel 1 μm min  
(Surface : Sealing)
  4. This temperature profile is based on the suggested metal mask and footprint.  
Please contact us if using different settings from our recommendation.
  5. Please use the specified dimension between PCBs.

A-A  
(20 : 1)

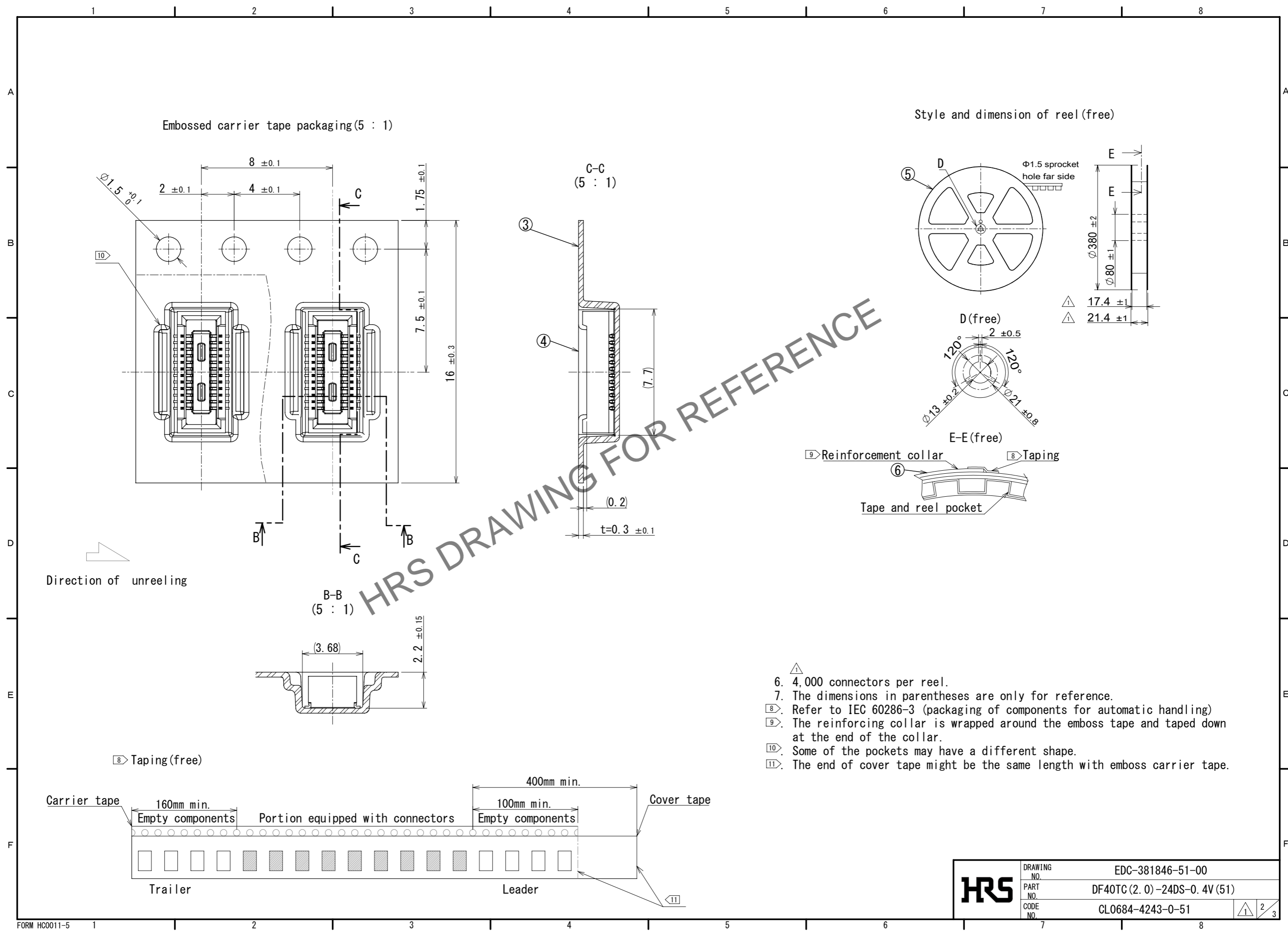


Mating position



| 2                         | Copper alloy | 3                     | 6            | PS                       | Clear, Reinforcement collar  |                                |            |              |
|---------------------------|--------------|-----------------------|--------------|--------------------------|------------------------------|--------------------------------|------------|--------------|
| 1                         | LCP          | Black                 | 5            | PS                       | Black, Plastic reel          |                                |            |              |
|                           |              |                       | 4            | Polyster                 | Clear, Cover tape            |                                |            |              |
|                           |              |                       | 3            | PS                       | Clear, Embossed carrier tape |                                |            |              |
| NO.                       | MATERIAL     | FINISH                | REMARKS      | NO.                      | MATERIAL                     | FINISH                         | REMARKS    |              |
| UNITS                     | SCALE        |                       | COUNT        | DESCRIPTION OF REVISIONS |                              | DESIGNED                       | CHECKED    | DATE         |
| mm                        | 10 : 1       |                       | 3            | DIS-H-00020203           |                              | NK. TOYOSU                     | YK. SATAKE | 2024. 03. 22 |
| HIROSE ELECTRIC CO., LTD. |              | APPROVED : TY. OOI    | 2023. 11. 28 | DRAWING NO.              |                              | EDC-381846-51-00               |            |              |
|                           |              | CHECKED : RT. SHIMIZU | 2023. 11. 28 | PART NO.                 |                              | DF40TC (2. 0) -24DS-0. 4V (51) |            |              |
|                           |              | DESIGNED : NK. TOYOSU | 2023. 11. 28 | CODE NO.                 |                              | CL0684-4243-0-51               |            |              |
|                           |              | DRAWN : NK. TOYOSU    | 2023. 11. 28 |                          |                              |                                |            |              |

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HRS DRAWING FOR REFERENCE

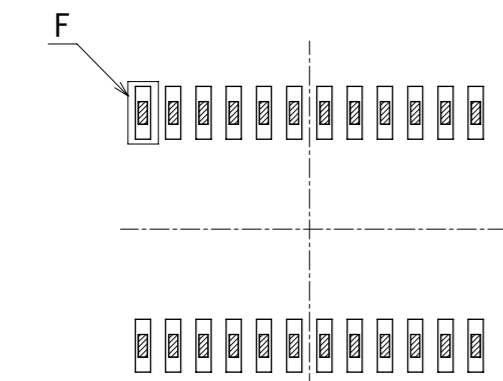
- △ 6. 4,000 connectors per reel.
- 7. The dimensions in parentheses are only for reference.
- 8. Refer to IEC 60286-3 (packaging of components for automatic handling)
- 9. The reinforcing collar is wrapped around the emboss tape and taped down at the end of the collar.
- 10. Some of the pockets may have a different shape.
- 11. The end of cover tape might be the same length with emboss carrier tape.

|            |             |                              |     |
|------------|-------------|------------------------------|-----|
| <b>HRS</b> | DRAWING NO. | EDC-381846-51-00             | 2/3 |
|            | PART NO.    | DF40TC (2.0) -24DS-0.4V (51) |     |
|            | CODE NO.    | CL0684-4243-0-51             |     |
|            |             |                              |     |

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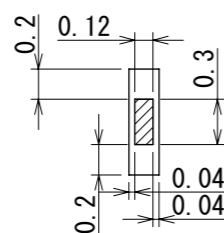
12. PLEASE REFER TO THE PRODUCT GUIDELINE ETAD-H1015 FOR DETAIL OF CONNECTOR HANDLING.

THE POSITION BETWEEN THE CONNECTOR AND PAD



Connector lead on PAD layout  
 PAD layout

F (20 : 1)

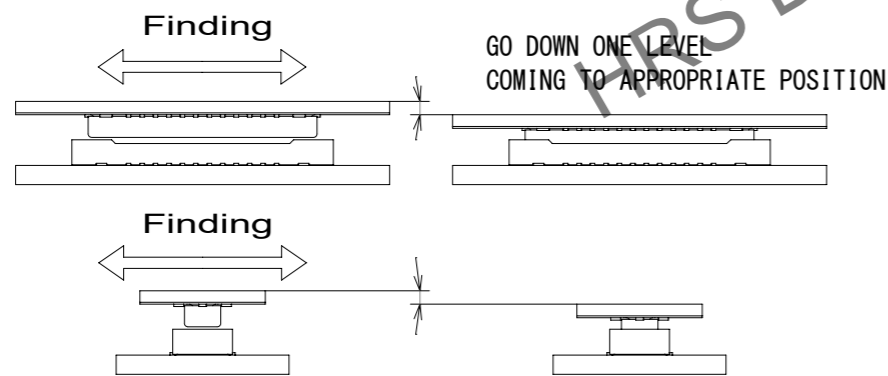


MATING METHOD

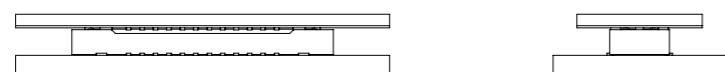
PLEASE MATE THE CONNECTOR BY HAND.

MATING PROCEDURE

- (1) FIND THE ALIGNMENT AREA TO THE CONNECTOR IN THE APPROPRIATE MATING POSITION. THIS CONNECTOR HAS AN ALIGNMENT CHAMBER (GUIDANCE RIBS) ON RECEPTACLE SIDE AND "R" ON PLUG SIDE, SO THAT THE CONNECTOR WILL BE SELF-ALIGNED. WHEN THE CONNECTOR COMES TO THE APPROPRIATE POSITION, THE CONNECTOR GOES INTO THE ALIGNED POSITION. WHEN ALIGNED, IT CAN BE FELT BY HAND.



- (2) WHEN GUIDING, THE CONNECTORS ARE ALIGNED PARALLEL TO EACH OTHER, WITH LONGITUDINAL AND LATERAL MOVEMENTS RESTRICTED. MATE THEM PROPERLY BY APPLYING FORCE IN THIS CONDITION.

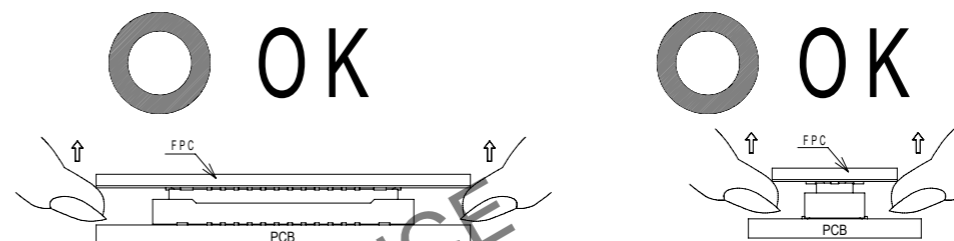


- (3) MAKE SURE THE CONNECTORS ARE MATED CORRECTLY. IF ONE SIDE IS FLOATING OR THE CONNECTORS ARE MATED IN ONE DIRECTION, UN-MATE THEM ONCE, AND THEN MATE THEM AGAIN, FOLLOWING THE PROCEDURES ABOVE FROM THE BEGINNING.

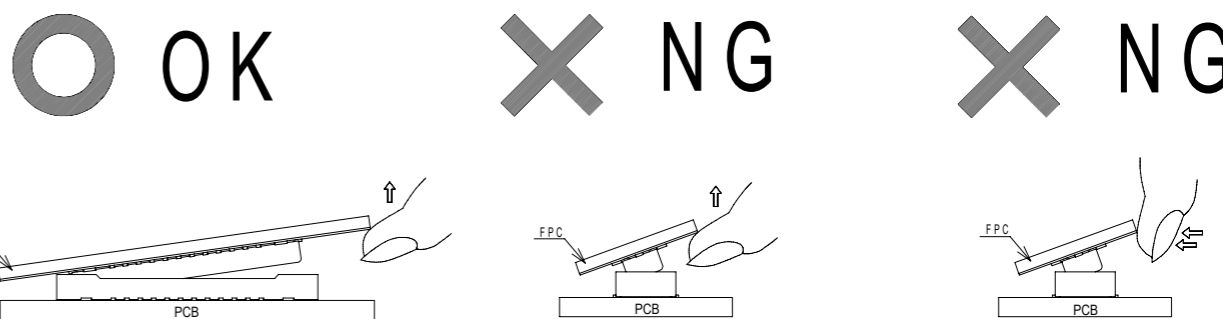
UN-MATING METHOD

PLEASE UN-MATE THE CONNECTOR BY HAND

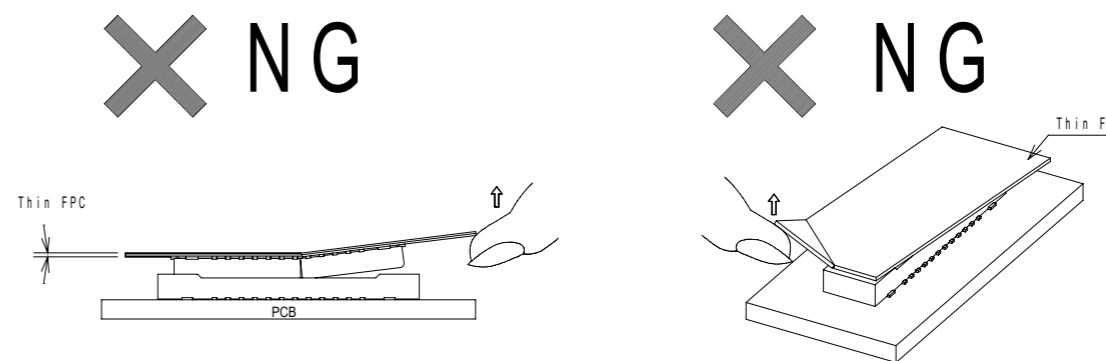
- (1) UN-MATE THE CONNECTORS PARALLEL TO EACH OTHER. HOWEVER, IF THE CONNECTORS HAVE HIGH PIN COUNTS OR THINNER FPC AND STIFFENER, IT BECOMES MORE DIFFICULT TO DO SO.



- (2) IF THE CONNECTOR CANNOT BE UN-MATED PARALLEL IT CAN BE REMOVED DIAGONALLY FROM THE PITCH DIRECTION. BE CAREFUL TO DO SO SINCE THIS ACTION APPLIES STRESS ON THE CONTACT.



- (3) IF THE FPC IS NOT RIGID, THE CONNECTOR CAN BE BROKEN. PLEASE CHECK THE ACTION OF THE FPC TO BE USED REPEATEDLY AT THE TIME OF TRIAL PRODUCTION. BE CAREFUL TO UN-MATE THEM FROM THE PITCH DIRECTION, PULLING IT FROM THE CORNER CAN ALSO RISK TO PUTTING STRESS ON CONTACTS.



|            |             |                             |
|------------|-------------|-----------------------------|
| <b>HRS</b> | DRAWING NO. | EDC-381846-51-00            |
|            | PART NO.    | DF40TC (2.0)-24DS-0.4V (51) |
|            | CODE NO.    | CL0684-4243-0-51            |
|            | 3/3         |                             |