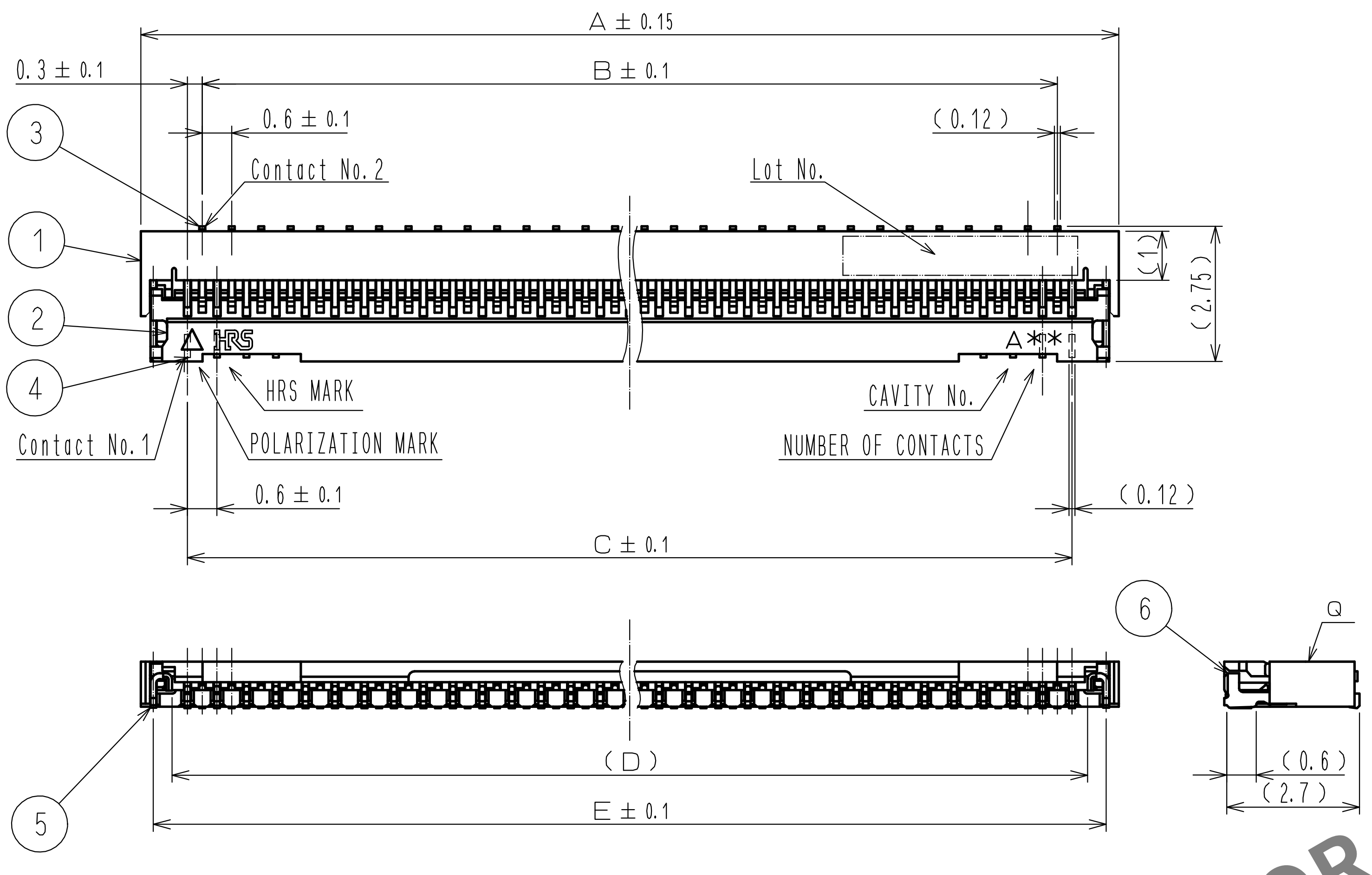
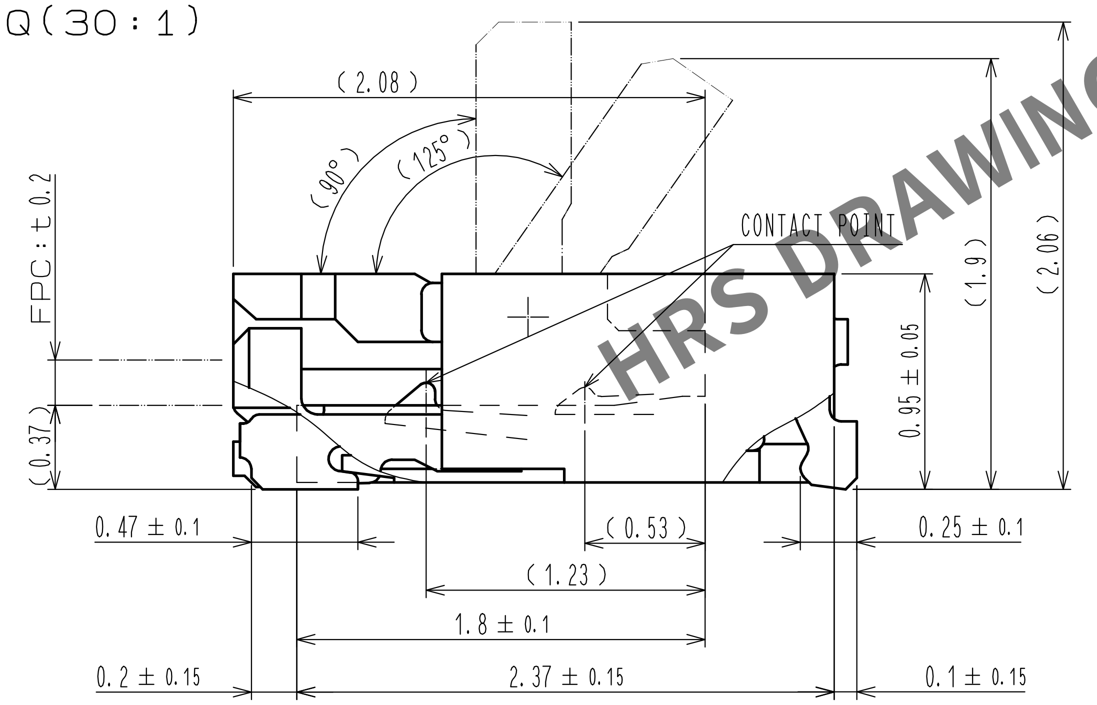
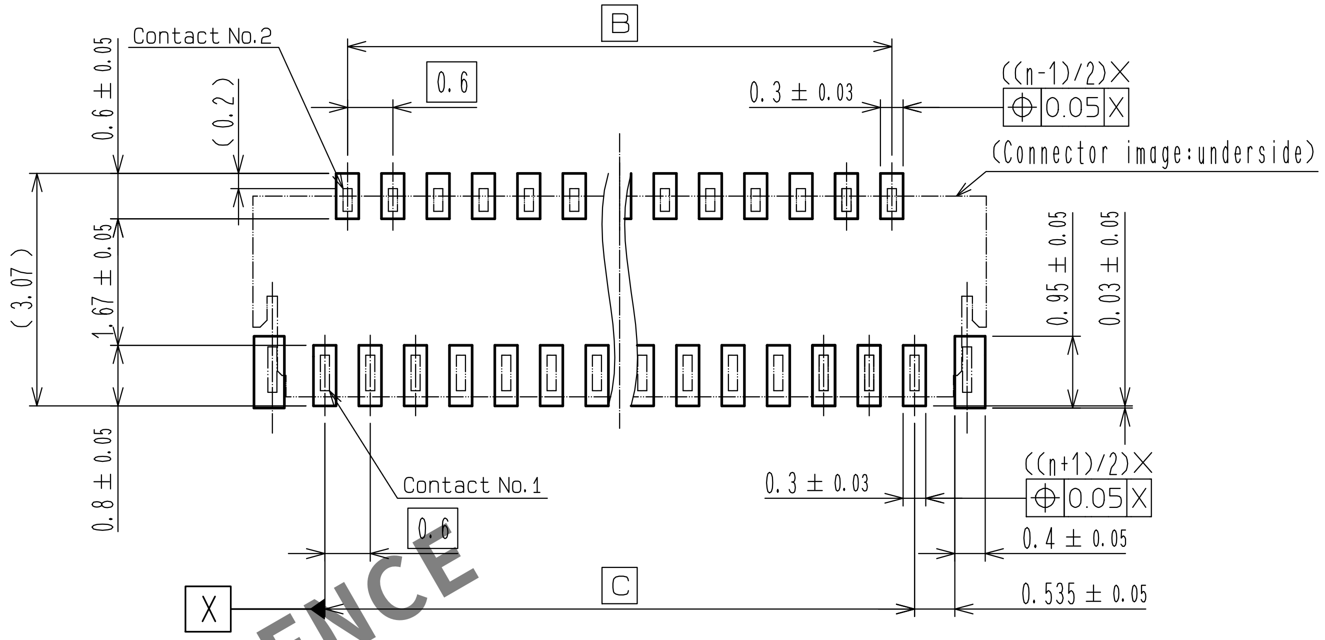


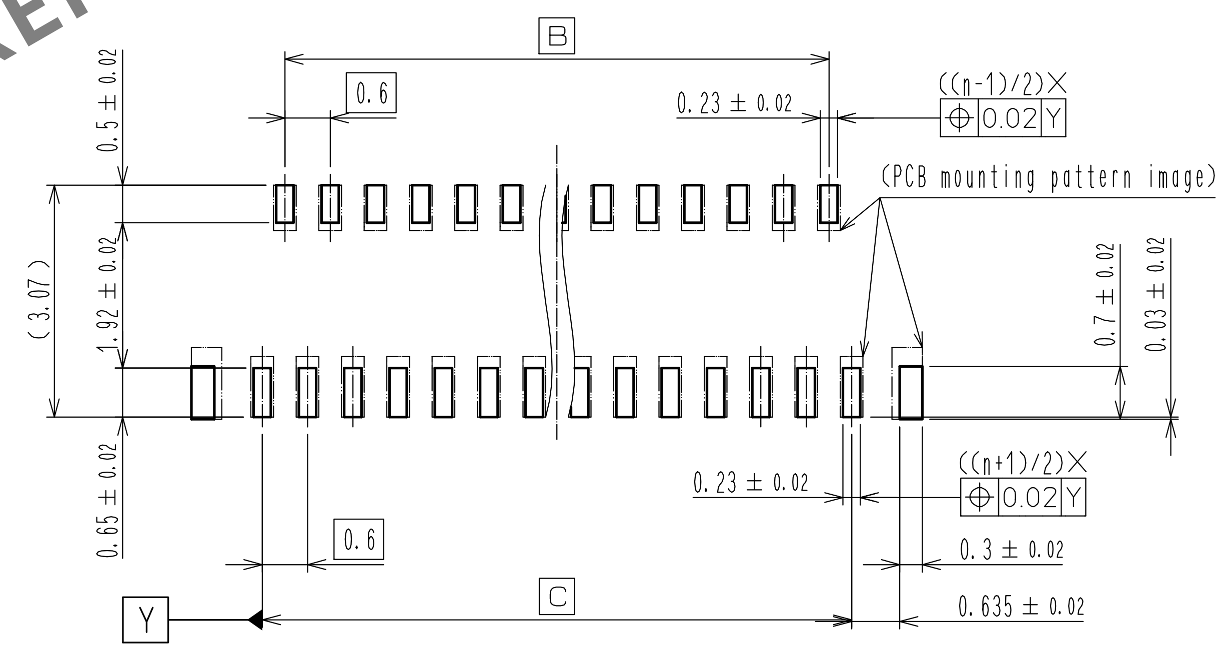


RECOMMENDED PCB MOUNTING PATTERN (10:1)



RECOMMENDED STENCIL PATTERN (10:1)

(RECOMMENDED STENCIL THICKNESS: t=0.1)



NOTE
1. THE DIMENSIONS IN PARENTHESES ARE FOR REFERENCE.
2. LEAD CO-PLANARITY INCLUDING REINFORCED METAL FITTINGS SHALL BE 0.1 MAX.
3. TO BE DELIVERED WITH TAPE AND REEL PACKAGES.
SEE ATTACHED PACKAGING SPECIFICATIONS FOR DETAILS.
4. NOTE THAT PREVENTIVE HOLE FOR SINK MARK COULD BE ADDED FOR IMPROVEMENT.
THE QUALITY REMAINS GOOD, EVEN WITH THE DARK SPOTS, WHICH COULD OCCASIONALLY OCCUR ON MOLDED PLASTIC.
5. THIS PRODUCT SATISFIES HALOGEN FREE REQUIREMENTS DEFINED AS
900ppm MAXIMUM CHLORINE, 900ppm MAXIMUM BROMINE, AND 1500ppm MAXIMUM TOTAL OF CHLORINE AND BROMINE.
6. 'n' REPRESENTS THE NUMBER OF CONTACTS.

NO.	MATERIAL	FINISH . REMARKS
10	(CONNECTOR)	
9	POLYSTYRENE	
8	POLYESTER	
7	POLYSTYRENE	
6	PHOSPHOR BRONZE (PLATED MATERIAL)	TIN PLATING (REFLOW FINISHED) 1 μm MIN COPPER 0.5 μm MIN
5	PHOSPHOR BRONZE (PLATED MATERIAL)	TIN PLATING (REFLOW FINISHED) 1 μm MIN COPPER 0.5 μm MIN
4	PHOSPHOR BRONZE	(CONTACT AREA, LEAD) GOLD PLATING 0.05 μmMIN OVER NICKEL 1 μm MIN (OTHER) NICKEL PLATING 1 μmMIN
3	PHOSPHOR BRONZE	(CONTACT AREA, LEAD) GOLD PLATING 0.05 μmMIN OVER NICKEL 1 μm MIN (OTHER) NICKEL PLATING 1 μmMIN
2	PA	LIGHT BROWN UL94HB
1	LCP	BEIGE UL94V-0

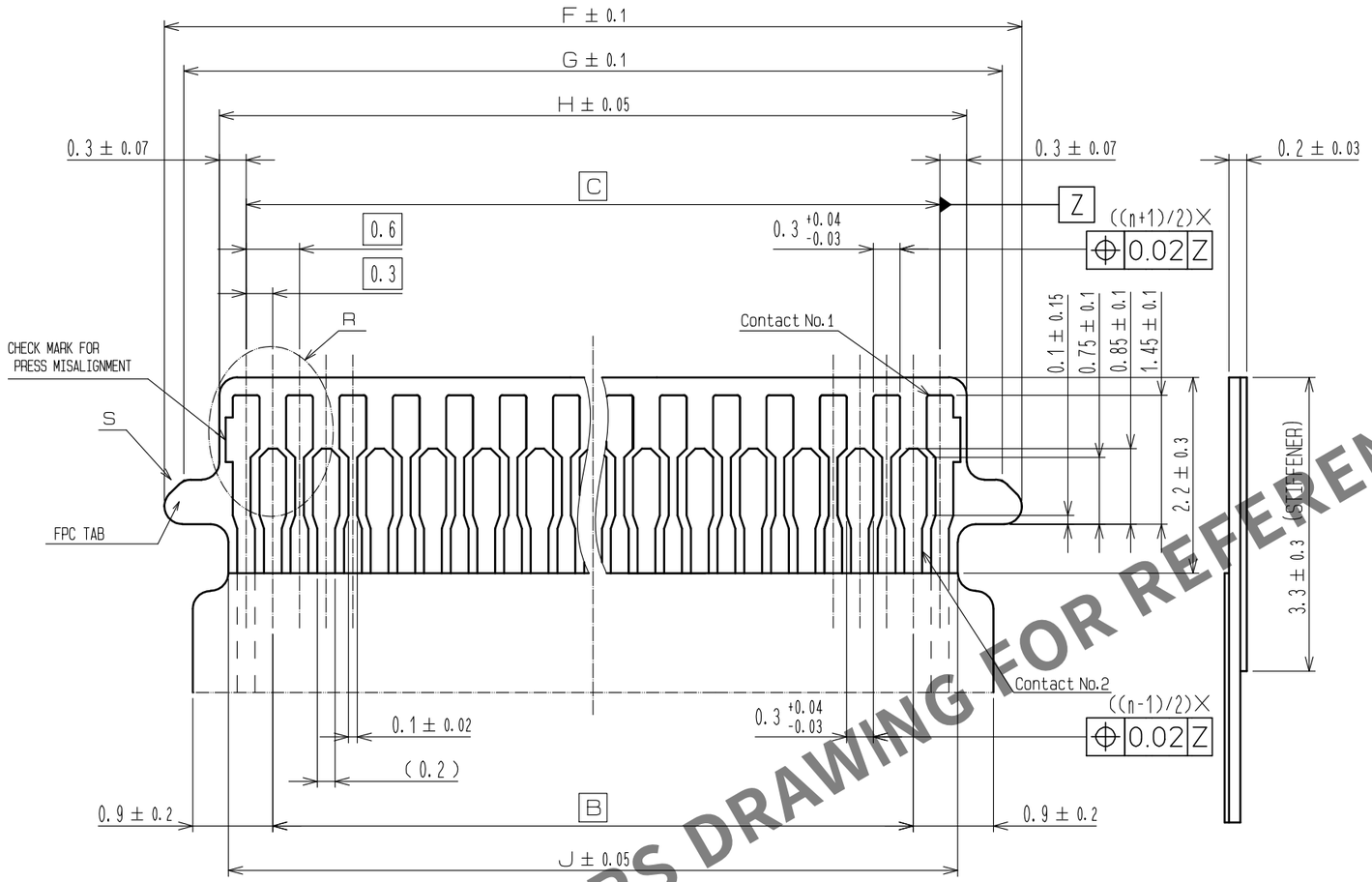
UNITS	SCALE	COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
mm	7 : 1	0				

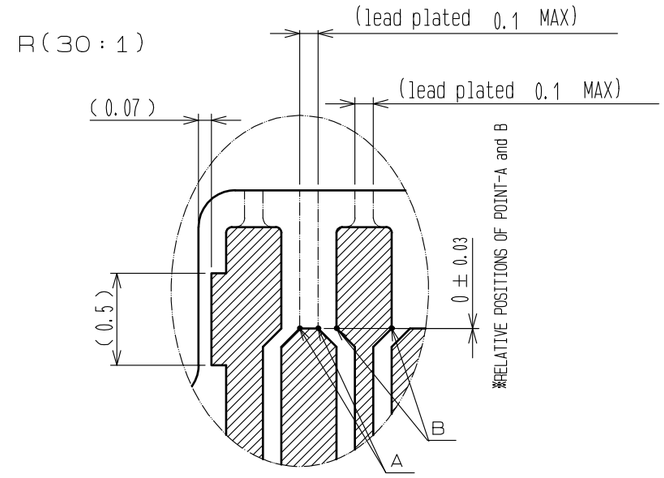
HIROSE ELECTRIC CO., LTD.

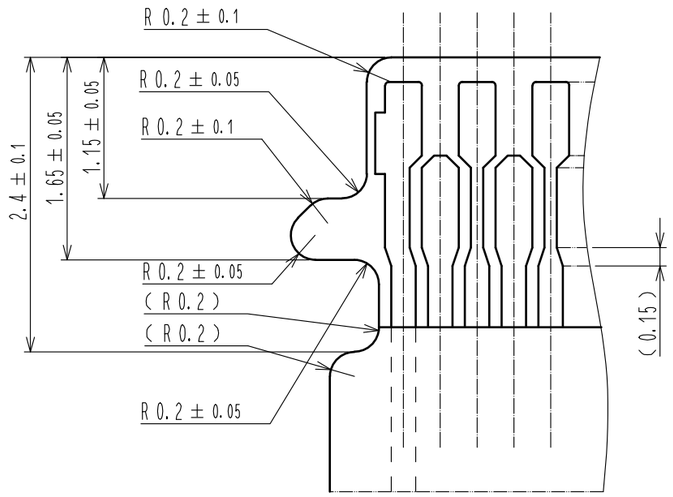
APPROVED	NF. MIYAZAKI	16.03.08	DRAWING NO.	EDC-158578-99-00
CHECKED	YH. MICHIDA	16.03.08	PART NO.	FH36W-**S-0.3SHW(99)
DESIGNED	KN. KOBAYASHI	16.03.08	CODE NO.	CL580
DRAWN	RN. IIDA	16.03.08		0 1/7

FORM HC0011-5-7

RECOMMENDED FPC (SCALE:FREE)

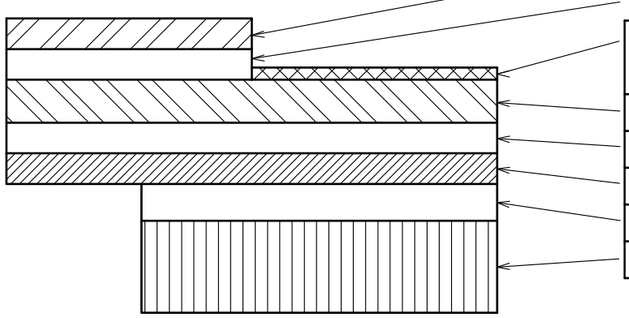






FPC CONFIGURATION (REFERENCE EXAMPLE)

(SCALE:FREE)

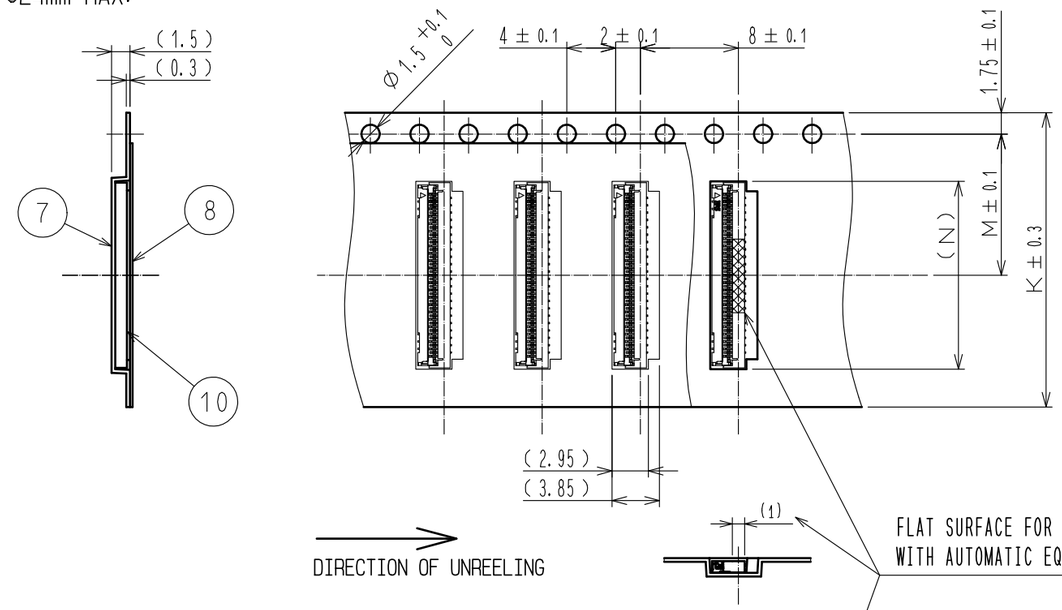


MATERIAL NAME	MATERIAL	THICKNESS(μm)
COVERING FILM LAYER.	POLYIMIDE 1mil thick.	25
COVER ADHESIVE		25
SURFACE TREATMENT	1μm to 5μm NICKEL UNDERPLATED 0.2μm GOLD PLATED	(3)
COPPER FOIL	Cu 1 oz	35
BASE ADHESIVE	HEAT-HARDENED ADHESIVE	25
BASE FILM	POLYIMIDE 1mil thick	25
REINFORCEMENT MATERIAL ADHESIVE	HEAT-HARDENED ADHESIVE	40
STIFFENER	POLYIMIDE 3mil thick	75

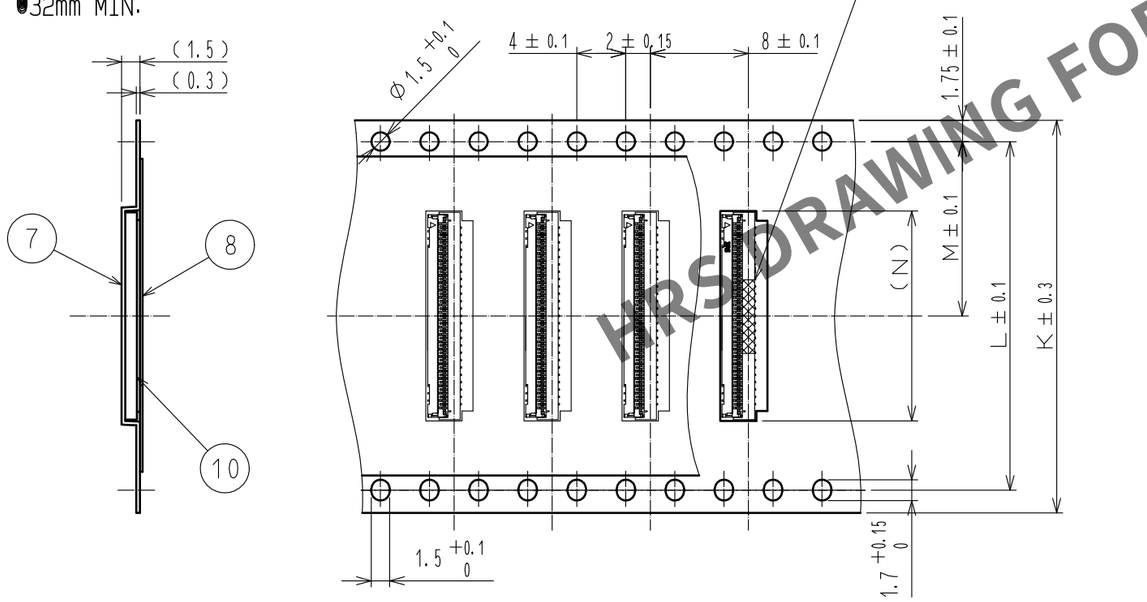
HRS	DRAWING NO.	EDC-158578-99-00
	PART NO.	FH36W-**S-0.3SHW(99)
	CODE NO.	CL580
		0 2/7

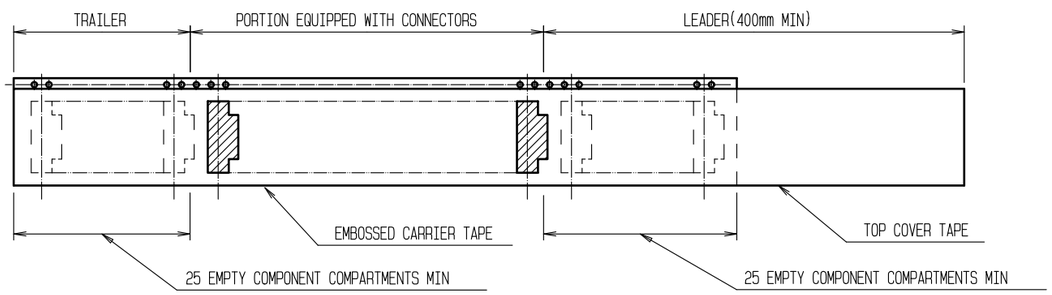
EMBOSSED CARRIER TAPE DIMENSION(2:1)

●24mm MAX.

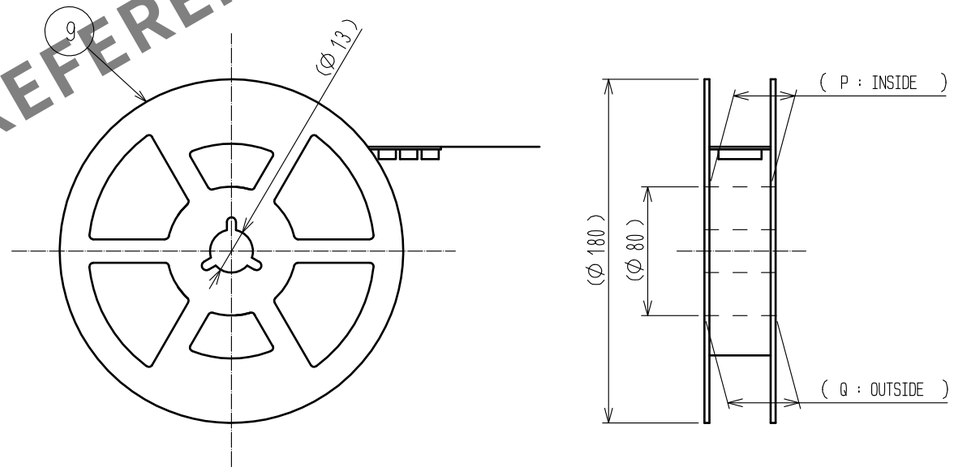


●32mm MIN.





REEL DIMENSION (FREE)



NOTE 7. PER REEL : 500 CONNECTORS.
8. REFER TO JIS C 0806 and IEC 60286-3
(PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING.)

<DRAWING FOR PACKING>

DRAWING NO.	EDC-158578-99-00
PART NO.	FH36W-**S-0.3SHW(99)
CODE NO.	CL580

PART NUMBER	CODE NUMBER	NUMBER OF CONTACT	DIMENSION OF CONNECTOR, FPC, PCB MOUNTING PATTERN AND STENCIL PATTERN									DIMENSION OF DRAWING FOR PACKING					
			A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
FH36W-11S-0.3SHW(99)	CL580-1625-3-99	11	4.9	2.4	3	3.63	4.39	4.84	4.4	3.6	3.4	16	-	7.5	5.1	17.4	21.4
FH36W-15S-0.3SHW(99)	CL580-1623-8-99	15	6.1	3.6	4.2	4.83	5.59	6.04	5.6	4.8	4.6	16	-	7.5	6.3	17.4	21.4
FH36W-17S-0.3SHW(99)	CL580-1616-2-99	17	6.7	4.2	4.8	5.43	6.19	6.64	6.2	5.4	5.2	16	-	7.5	6.9	17.4	21.4
FH36W-19S-0.3SHW(99)	CL580-1612-1-99	19	7.3	4.8	5.4	6.03	6.79	7.24	6.8	6	5.8	16	-	7.5	7.5	17.4	21.4
FH36W-23S-0.3SHW(99)	CL580-1614-7-99	23	8.5	6	6.6	7.23	7.99	8.44	8	7.2	7	24	-	11.5	8.7	25.4	29.4
FH36W-25S-0.3SHW(99)	CL580-1610-6-99	25	9.1	6.6	7.2	7.83	8.59	9.04	8.6	7.8	7.6	24	-	11.5	9.3	25.4	29.4
FH36W-27S-0.3SHW(99)	CL580-1608-4-99	27	9.7	7.2	7.8	8.43	9.19	9.64	9.2	8.4	8.2	24	-	11.5	9.9	25.4	29.4
FH36W-31S-0.3SHW(99)	CL580-1609-7-99	31	10.9	8.4	9	9.63	10.39	10.84	10.4	9.6	9.4	24	-	11.5	11.1	25.4	29.4
FH36W-33S-0.3SHW(99)	CL580-1622-5-99	33	11.5	9	9.6	10.23	10.99	11.44	11	10.2	10	24	-	11.5	11.7	25.4	29.4
FH36W-39S-0.3SHW(99)	CL580-1620-0-99	39	13.3	10.8	11.4	12.03	12.79	13.24	12.8	12	11.8	24	-	11.5	13.5	25.4	29.4
FH36W-51S-0.3SHW(99)	CL580-1605-6-99	51	16.9	14.4	15	15.63	16.39	16.84	16.4	15.6	15.4	32	28.4	14.2	17.1	33.4	37.4
FH36W-61S-0.3SHW(99)	CL580-1611-9-99	61	19.9	17.4	18	18.63	19.39	19.84	19.4	18.6	18.4	32	28.4	14.2	20.1	33.4	37.4

HRS	DRAWING NO.	EDC-158578-99-00
	PART NO.	FH36W-**S-0.3SHW(99)
	CODE NO.	CL580

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This connector is small and thin and requires delicate and careful handling.
Read through the instructions shown below and handle the connector properly.
Each values indicating here are for reference and may differ from standard value.

[INSTRUCTIONS FOR MOUNTING ON THE BOARD]

♦Warp of Board
Minimize warp of the board as much as possible.
Lead co-planarity including reinforced metal fittings is 0.1 mm or less.
Too much warp of the board may result in a soldering failure.

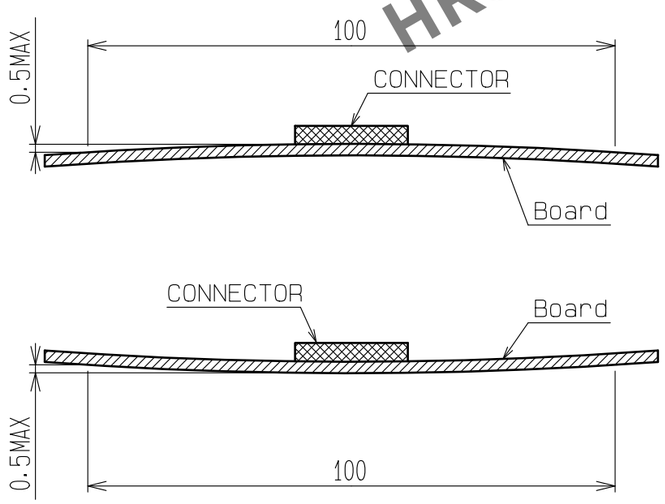
♦Flexible board design
Please make sure to put a stiffener on the backside of the flexible board.
We recommend a glass epoxy material with the thickness of 0.3mm MIN.

♦Load to Connector
Do not add 0.5N or greater external force when unreel or pick and place the connector etc. or it may get broken.
In addition, do not insert the FPC or operate the connector before mounting it.

[INSTRUCTIONS FOR PCB HANDLING AFTER MOUNTING THE CONNECTOR]

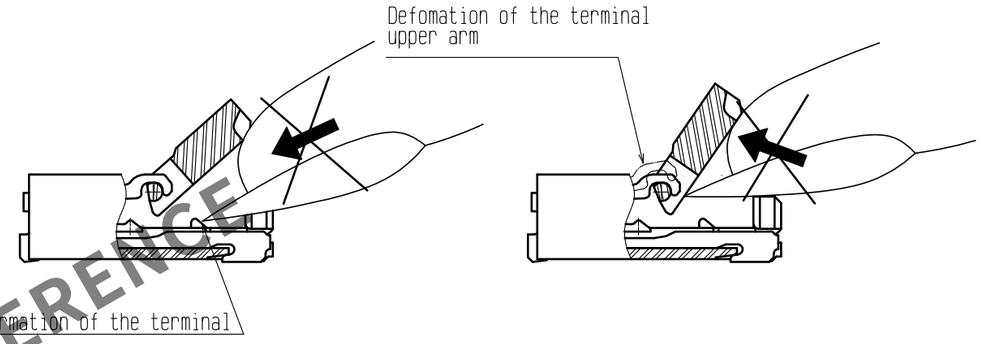
♦Load to Board
·Splitting a large board into several pieces
·Screwing the board
Avoid the handling described above so that no force is exerted on the board during the assembly process.
Otherwise, the connector may become defective.

♦Amount of Warp
The warp of a 100 mm wide board should be 0.5 mm or less.
The warp of board suffers stress on connector and the connector may become defective.



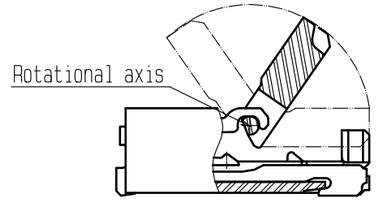
[INSTRUCTIONS ON INSERTING FPC AND CONNECTION]

♦ Use of the actuator
1. Be very careful not to apply excessive force when releasing the actuator in the initial position (with no FPC inserted).
If you use your nail or finger as shown below, the terminals may be deformed.

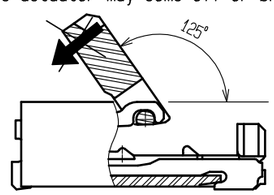


Example 1 Example 2

2. The actuator rotates around the rotational axis as shown below.
Rotate the actuator.



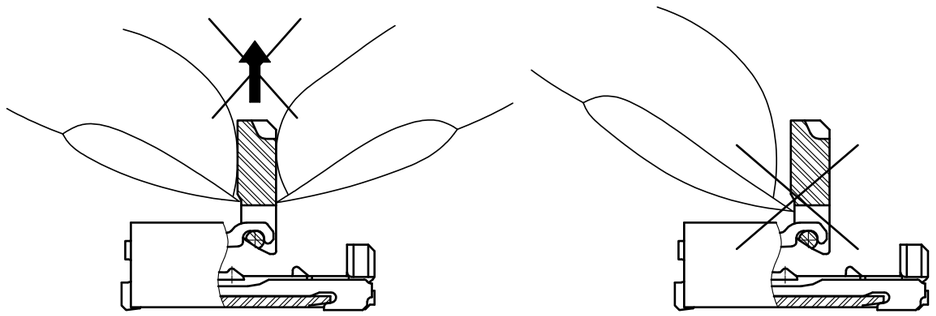
3. The actuator will not open more than 125°.
Do not apply any force backward beyond this point.
Otherwise, the actuator may come off or break.



<INSTRUCTION MANUAL 1>

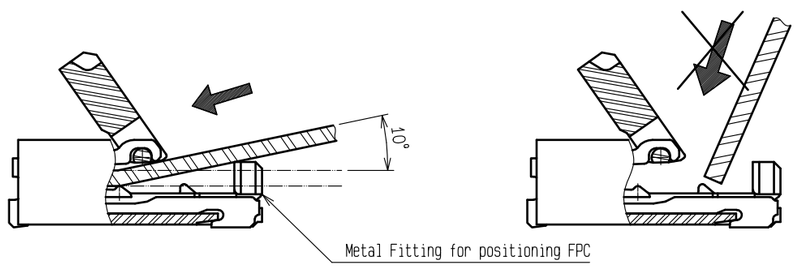
DRAWING NO.	EDC-158578-99-00
PART NO.	FH36W-**S-0.3SHW(99)
CODE NO.	CL580

4. Move the actuator at approximately the center.
5. Do not pinch or pick the actuator to lift it as shown below. Otherwise, it may break.
   (Do not carry out any operation other than rotating the actuator as shown in 2 above.)



♦Direction of Contacts
This connector has contacts on the bottom. Thus, insert it with the exposed conductors face down.

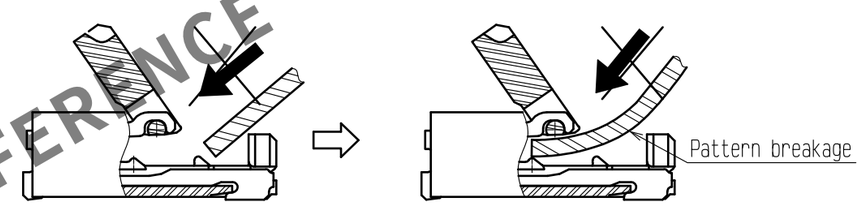
♦Inserting the FPC
1. Insert the FPC by about 10 degrees along the surface and at a right angle to the connector.
   Insert it properly to the very end.
   If the FPC is inserted at a slant (incorrectly),
   the conductors may short-circuit due to pitch shift or the edge of the FPC may catch in the terminals,
   resulting in deformation of the terminals.



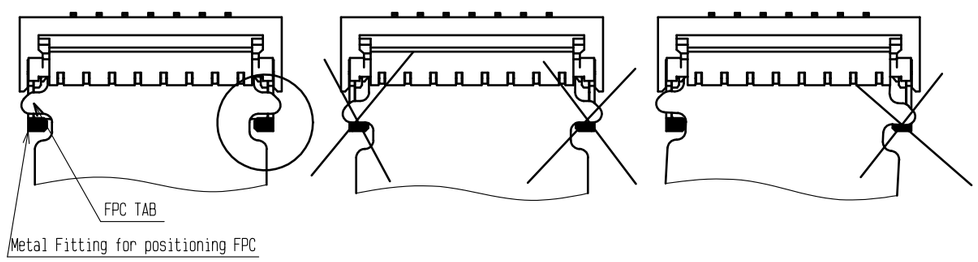
2. Do not insert the FPC diagonally from above.
   If the FPC is inserted at a slant (incorrectly) as shown below in the FPC insertion process,
   the FPC may bend and patterns may break or the FPC may not insert completely,
   resulting in improper conduction.

※Keep a sufficient FPC insertion space in the stage of the layout in order to avoid
incorrect FPC insertion.
Besides, it is not difficult to insert FPC correctly all the way to the end.
Design the proper layout of parts.

※Make adjustments with the FPC manufacturer for FPC bending perfomance and wire breakage.



3. Do not rotate the actuator when FPC TAB is on Metal Fittings.
   Make sure the position of FPC TAB and Metal Fittings before rotate the actuator.



♦Checking the Locking Condition
In the locked condition, make sure that the actuator is horizontal on the board surface.
Do not apply excessive force to it near the 0° position of the actuator.
Otherwise, the terminals may be deformed. (Allowable force: 1 N or less)

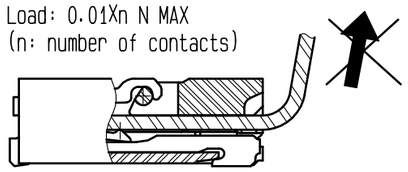
<INSTRUCTION MANUAL 2>

DRAWING NO.	EDC-158578-99-00
PART NO.	FH36W-**S-0.3SHW(99)
CODE NO.	CL580

[INSTRUCTIONS ON FPC LAYOUT AFTER CONNECTION]

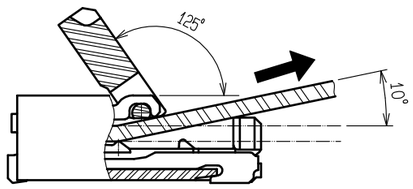
♦Load to FPC

Be very careful not to apply any force to the FPC after inserting it.
Otherwise, the connector may become unlocked or the FPC may break.
Fix the FPC, in particular, when loads are applied to it continuously.
Design the FPC layout with care not to bend it sharply near the insertion opening.



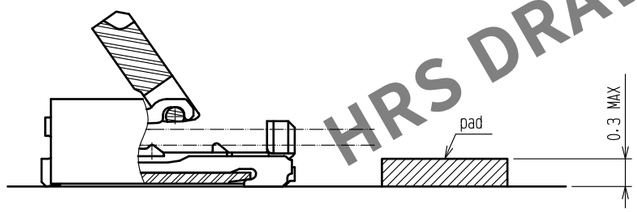
[INSTRUCTIONS ON REMOVING FPC]

♦Release the actuator to remove the FPC.



[OTHER INSTRUCTIONS]

In case a pad to support FPC is set in front of connector, that pad needs to be 0.30 MAX.



♦Instructions on Manual Soldering

Follow the instructions shown below when soldering the connector manually during repair work, etc.

1. Do not perform reflow soldering or manual soldering with the FPC inserted into the connector.
2. Do not heat the connector excessively. Be very careful not to let the soldering iron contact any parts other than connector leads. Otherwise, the connector may be deformed or melt.
3. Do not use excessive solder (or flux).
   If excessive solder (or flux) is used on the terminals, solder or flux may adhere to the contacts or rotating parts of the actuator, resulting in poor contact or a rotation failure of the actuator.
   Supplying excessive solder to the reinforcing bracket may hinder actuator rotation, resulting in breakage of the connector.

HRS	DRAWING NO.	EDC-158578-99-00
	PART NO.	FH36W-**S-0.3SHW(99)
	CODE NO.	CL580