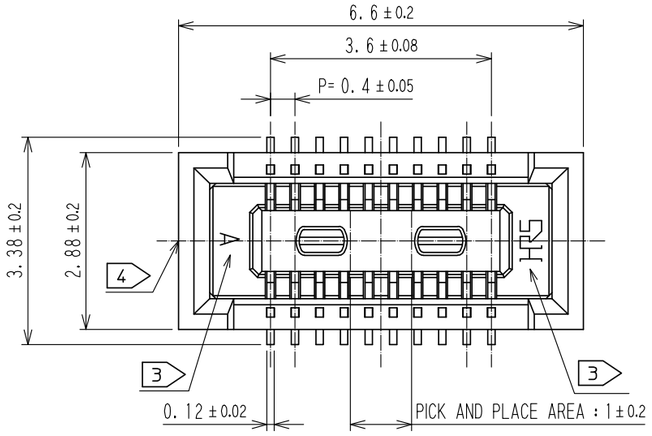
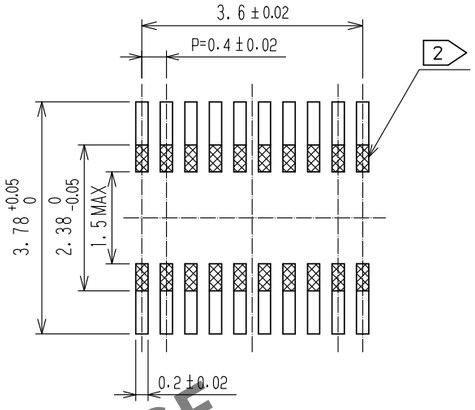
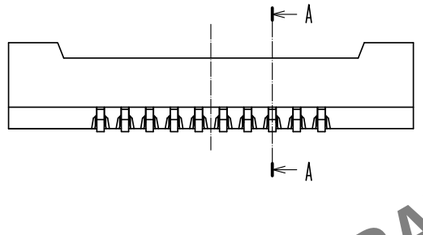
Mar.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

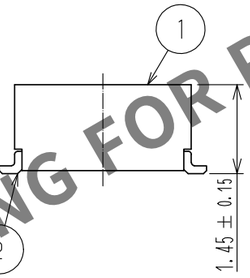


RECOMMENDED PATTERN

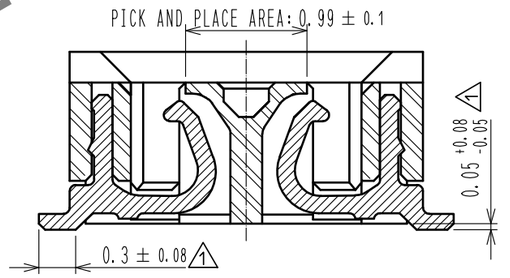


RECOMMENDED METAL MASK THICKNESS : 120㎛
RECOMMENDED METAL MASK OPENING RATIO : 80% FOR LEAD PAD

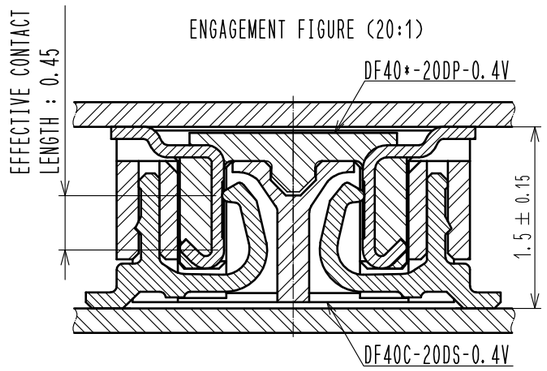




A-A(20:1)



ENGAGEMENT FIGURE (20:1)



HRS DRAWING FOR REFERENCE

NOTES) 1. ALL LEADS METAL FITTINGS CO-PLANARITY SHALL BE 0.1mm MAX.
2 ▨ IS NO PATTERN AREA OTHER THAN THE SAME CIRCUIT.
3 HRS MARK AND CAV NO. ARE INDICATED IN APPROXIMAL POSITION SHOWN.
4 GATE POSITION IS POSITIONED IN APPROXIMAL AREA SHOWN.

NO.	MATERIAL	FINISH , REMARKS	NO.	MATERIAL	FINISH , REMARKS
2	PHOSPHOR BRONZE	CONTACT AREA:GOLD 0.05μm MIN	6	PS	CLEAR, REINFORCEMENT COLLAR
		SMT LEAD:GOLD 0.05μm MIN	5	PS	BLACK, PLASTIC REEL
		UNDERPLATING:NICKEL 1μm MIN	4	POLYESTER	CLEAR, COVER TAPE
1	LCP	BLACK, UL94V-0	3	PS	CLEAR, EMBOSSED CARRIER TAPE

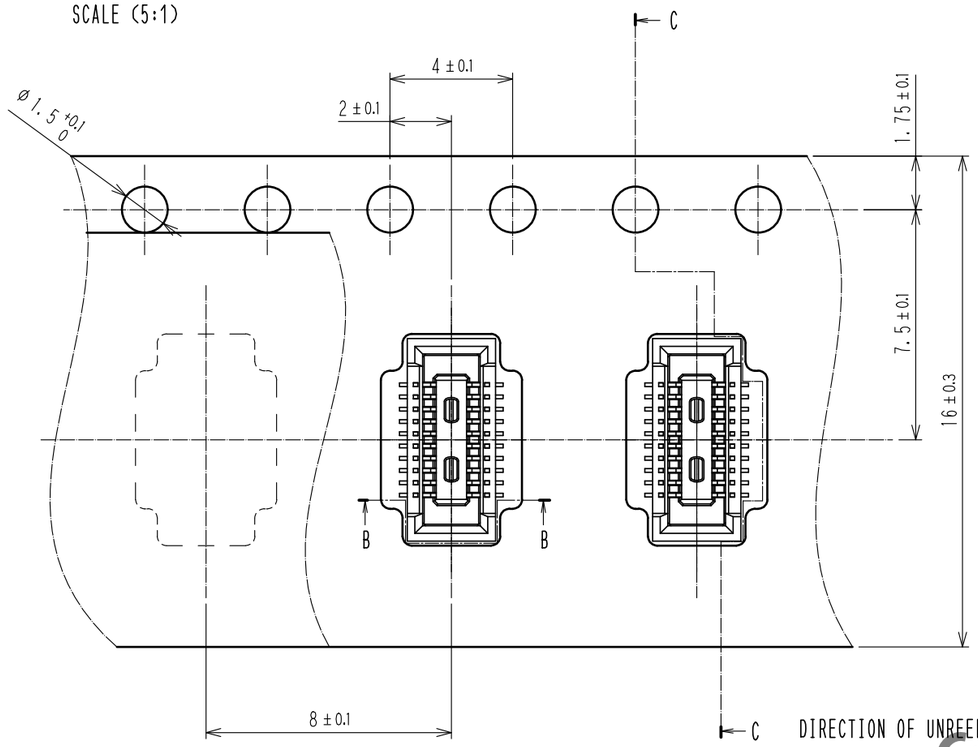
UNITS	SCALE		COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
mm	10:1	△1	4	DIS-H-00015069	TY. MORISHITA	RT. SHIMIZU	20220920

HIROSE ELECTRIC CO., LTD.

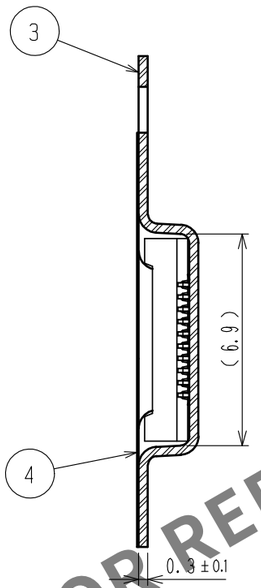
APPROVED	MO. ISHIDA	20161005	DRAWING NO. EDC-311337-58-01
CHECED	TS. MIYAZAKI	20161005	PART NO. DF40C-20DS-0.4V(58)
DESIGNED	SH. HOSODA	20161005	CODE NO. CL0684-4005-9-58 △1 1/3
DRAWN	SN. NUMAZAKI	20161004	

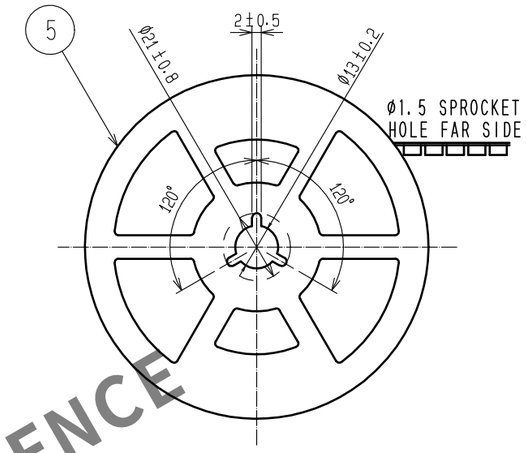
Mar.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

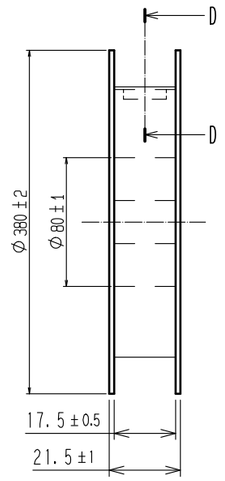
SCALE (5:1)



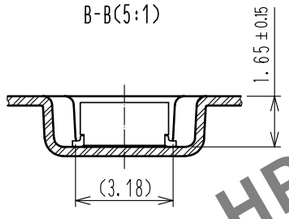
C-C(5:1)



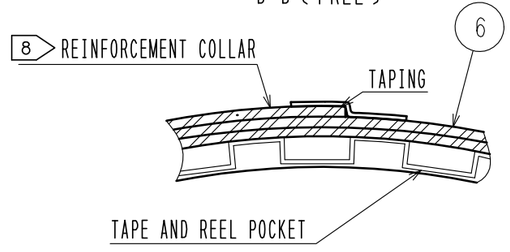


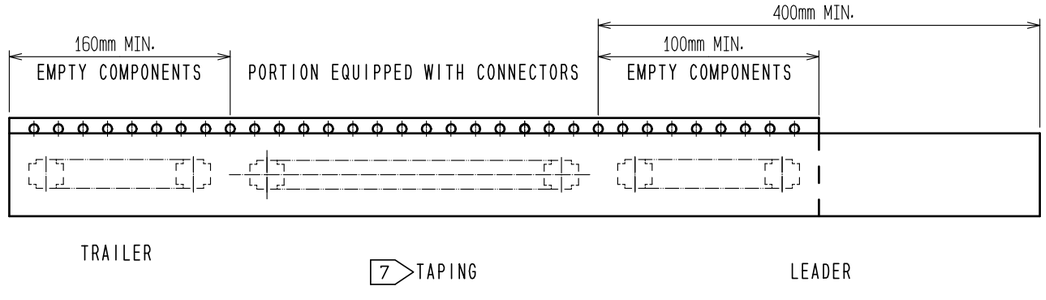


B-B(5:1)



D-D (FREE)





NOTES 5. PER REEL 1000 CONNECTORS.
6. THE DIMENSIONS IN PARENTHESES ARE FOR REFERENCE.
7 REFER TO JIS C 0806(PACKING OF COMPONENTS FOR AUTOMATIC HANDLING)
8 AFTER PACKAGING, ROLL 2 METERS OF THE REINFORCEMENT COLLAR TO OUTER CIRCUMFERENCE OF TAPE AND REEL POCKET, AND TAPE DOWN AT THE END THE COLLAR.
△1 9. PRODUCT REELS AND PACKAGING WILL BE CLEARLY LABELED WITH THE PART NUMBER. LOT NUMBER AND QUANTITY.

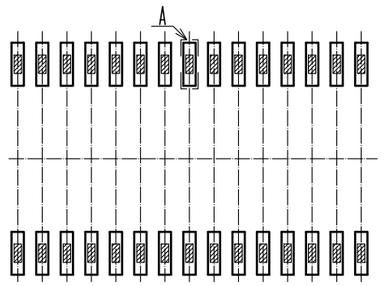
HRS DRAWING FOR REFERENCE

HRS	DRAWING NO.	EDC-311337-58-01
	PART NO.	DF40C-20DS-0.4V(58)
	CODE NO.	CL0684-4005-9-58 △1 2/3

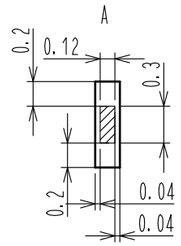
Mar.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

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

THE POSITION BETWEEN THE CONNECTOR AND PAD

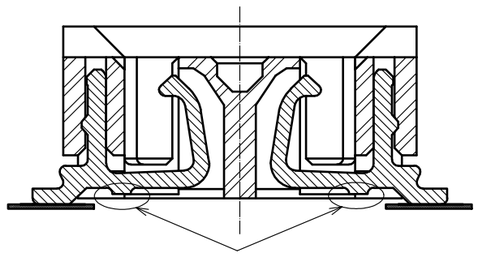


Connector lead on PAD layout
PAD layout



CAUTION FOR SOLDERING

THERE IS METAL EXPOSURE AREA BOTTOM OF THE CONNECTOR.
TO AVOID SOLDER WICKING FROM THE BOTTOM SIDE,
PLEASE DESIGN PCB PAD AND STENCIL WITH
RECOMMENDED DIMENSIONS.

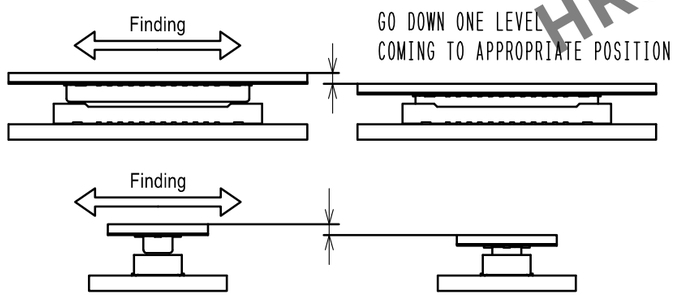


MATING METHOD

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.

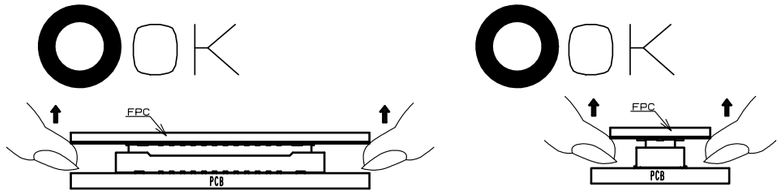


(3) MAKE SURE THE CONNECTORS ARE MATED CORRECTLY. IF ONE SIDE IS FLOATING OR THE CONNECTORS ARE MATED IN ONE
DIRECTION, UN-MATE THEM ONCE, AND THEN MATE THEM AGAIN, FOLLOWING THE PROCEDURES ABOVE FROM THE BEGINNING.

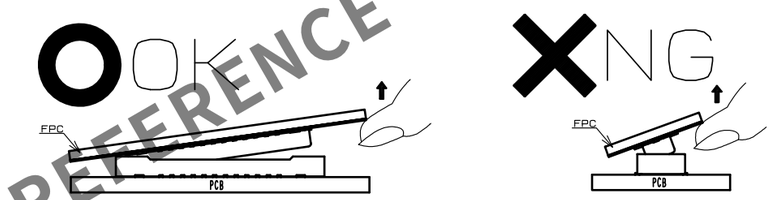
UN-MATING METHOD

PLEASE UN-MATE THE CONNECTOR BY HAND

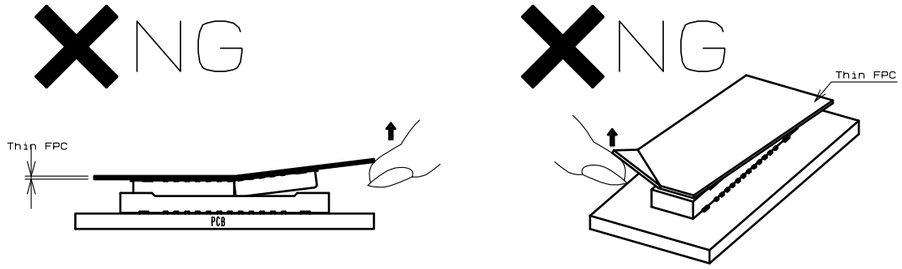
(1) UN-MATE THE CONNECTORS PARALLEL TO EACH OTHER. HOWEVER, IF THE CONNECTORS HAVE HIGH PIN COUNTS OR
THINNER FPC AND STIFFENER, IT BECOMES MORE DIFFICULT TO DO SO.



(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.

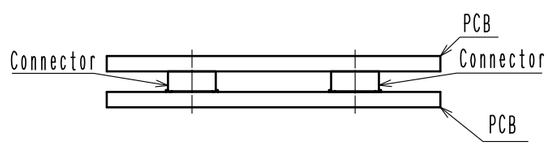


(3) IF THE FPC IS NOT RIGID, THE CONNECTOR CAN BE BROKEN. PLEASE CHECK THE ACTION OF THE FPC TO BE USED
REPEATEDLY AT THE TIME OF TRIAL PRODUCTION. BE CAREFUL TO UN-MATE THEM FROM THE PITCH DIRECTION.
PULLING IT FROM THE CORNER CAN ALSO RISK TO PUTTING STRESS ON CONTACTS.

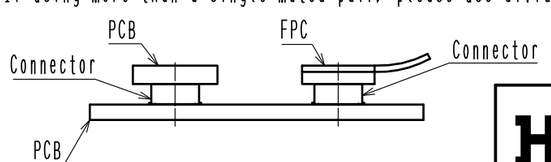


(4) Caution for using multiple connectors.

Please avoid using more than a single mated pair of connectors between two sandwiched PCBs,
like the picture on the below.
Due to possible misalignment, connector breakage while and after mating may occur.



If using more than a single mated pair, please use divided boards for each connection.



HRS DRAWING FOR REFERENCE

DRAWING NO.	EDC-311337-58-01
PART NO.	DF40C-20DS-0.4V(58)
CODE NO.	CL0684-4005-9-58

△1 3/3