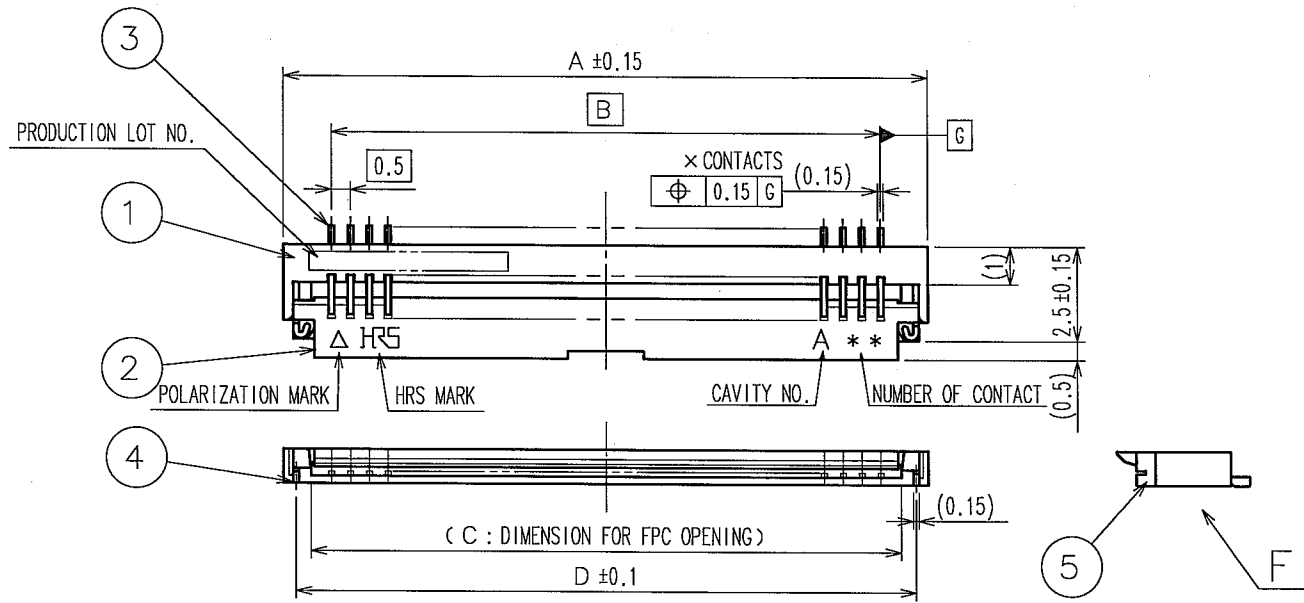


APPLICABLE STANDARD					
RATING	OPERATING TEMPERATURE RANGE	-55 °C TO 85 °C	STORAGE TEMPERATURE RANGE	-10 °C TO 50 °C (PACKED CONDITION)	
	VOLTAGE	50 V AC / DC	OPERATING OR STORAGE HUMIDITY RANGE	RELATIVE HUMIDITY 90 % MAX (NOT DEWED)	
	CURRENT	0.5 A (note 1)	APPLICABLE CABLE	t=0.3 ± 0.03mm, GOLD PLATING	
SPECIFICATIONS					
ITEM	TEST METHOD		REQUIREMENTS	QT	AT
CONSTRUCTION					
GENERAL EXAMINATION	VISUALLY AND BY MEASURING INSTRUMENT.		ACCORDING TO DRAWING.	X	X
MARKING	CONFIRMED VISUALLY.			X	X
ELECTRIC CHARACTERISTICS					
VOLTAGE PROOF	150 V AC FOR 1 min.		NO FLASHOVER OR BREAKDOWN.	X	X
INSULATION RESISTANCE	100 V DC.		500 MΩ MIN.	X	X
CONTACT RESISTANCE	AC 20 mV MAX (1 KHz), 1 mA .		100 mΩ MAX. INCLUDING FPC, FFC BULK RESISTANCE (L=8mm)	X	X
MECHANICAL CHARACTERISTICS					
VIBRATION	FREQUENCY 10 TO 55 Hz, HALF AMPLITUDE 0.75 mm, - m/s ² FOR 10 CYCLES IN 3 DIRECTIONS.		① NO ELECTRICAL DISCONTINUITY OF 1 μs. ② CONTACT RESISTANCE: 100 mΩ MAX. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—
SHOCK	981 m/s ² , DURATION OF PULSE 6 ms AT 3 TIMES IN 3 DIRECTIONS.			X	—
MECHANICAL OPERATION	20 TIMES INSERTIONS AND EXTRACTIONS.		① CONTACT RESISTANCE: 100 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—
FPC RETENSION FORCE	MEASURED BY APPLICABLE FPC. (THICKNESS OF FPC SHALL BE t=0.30mm AT INITIAL CONDITION.)		① DIRECTION OF INSERTION : 0.15N × n MIN. ② VERTICAL DIRECTION OF INSERTION : 0.15N × n MIN. (note 2)	X	—
LOCK OPERATION FORCE	MEASURED BY APPLICABLE FPC. (THICKNESS OF FPC SHALL BE t=0.30mm AT INITIAL CONDITION.)		① CLOSING FORCE : ▲ 0.3N × n MAX. (4 ~ 10 POS.) ▲ 0.1N × n MAX. (11 ~ 50 POS.) ② OPENING FORCE : 0.05N × n MIN.	X	—
ENVIRONMENTAL CHARACTERISTICS					
CORROSION SALT MIST	EXPOSED AT 35 °C , 5 % SALT WATER SPRAY FOR 96 h.		① CONTACT RESISTANCE: 100 mΩ MAX. ② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. ③ NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.	X	—
RAPID CHANGE OF TEMPERATURE	TEMPERATURE -55 → +15 TO +35 → +85 → +15 TO +35 °C TIME 30 → 2~3 → 30 → 2~3 min UNDER 5 CYCLES.		① CONTACT RESISTANCE: 100 mΩ MAX. ② INSULATION RESISTANCE: 50 MΩ MIN. ③ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—
DAMP HEAT (STEADY STATE)	EXPOSED AT 40 °C, RELATIVE HUMIDITY 90 TO 95 %, 96 h.			X	—
DAMP HEAT, CYCLIC	EXPOSED AT -10 TO +65 °C, RELATIVE HUMIDITY 90 TO 96 %, 10 CYCLES, TOTAL 240 h.		① CONTACT RESISTANCE: 100 mΩ MAX. ② INSULATION RESISTANCE: 1 MΩ MIN. (AT HIGH HUMIDITY) ③ INSULATION RESISTANCE: 50 MΩ MIN. (AT DRY) ④ NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	X	—
COUNT	DESCRIPTION OF REVISIONS		DESIGNED	CHECKED	DATE
△	2	DIS-F-000618	KK.FURUKAWA	HY.KISHI	05.12.05
REMARK			APPROVED	RI.TAKAYASU	05.09.22
			CHECKED	HY.KISHI	05.09.22
			DESIGNED	KK.FURUKAWA	05.09.22
Unless otherwise specified, refer to JIS C 5402.			DRAWN	KK.YAMAMOTO	05.09.22
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC4-155198-02
HRS	SPECIFICATION SHEET		PART NO.	FH19SC-**S-0.5SH(05)	
	HIROSE ELECTRIC CO., LTD.		CODE NO.	CL580	△ 1/2

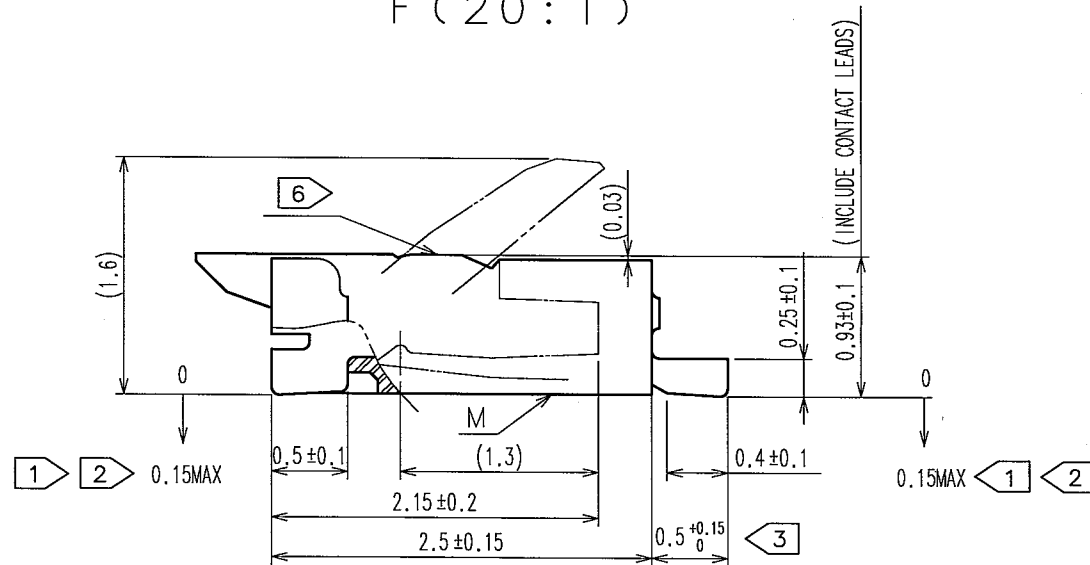
SPECIFICATIONS					
ITEM	TEST METHOD	REQUIREMENTS	QT	AT	
DRY HEAT	EXPOSED AT 85 °C, 96 h.	① CONTACT RESISTANCE: 100 mΩ MAX.	x	—	
COLD	EXPOSED AT -55°C, 96 h.	② NO DAMAGE, CRACK AND LOOSENESS OF PARTS.	x	—	
SURPHUR DIOXIDE [JIS C 0090]	EXPOSED AT 40 °C , RELATIVE HUMIDITY 80% , 25 PPM FOR 96 h.	① CONTACT RESISTANCE: 100 mΩ MAX.	x	—	
HYDROGEN SULPHIDE [JIS C 0092]	EXPOSED AT 40 °C , RELATIVE HUMIDITY 80% , 10 ~ 15 PPM FOR 96 h.	② NO DAMAGE, CRACK AND LOOSENESS OF PARTS. ③ NO EVIDENCE OF CORROSION WHICH AFFECTS TO OPERATION OF CONNECTOR.	x	—	
SOLDERABILITY	SOLDERED AT SOLDER TEMPERATURE, 235 °C FOR IMMERSION DURATION, 2 sec.	A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM OF 95 % OF THE SURFACE BEING IMMersed.	x	—	
RESISTANCE TO SOLDERING HEAT	1) REFLOW SOLDERING : PEAK TMP. 250 °C MAX . REFLOW TMP. 230 °C MIN FOR 60 sec. 2) SOLDERING IRONS : TMP. 350 ± 5 °C FOR 5 sec .	NO DEFORMATION OF CASE OF EXCESSIVE LOOSENESS OF THE TERMINALS.	x	—	
<p>(note 1)</p> <p>WHEN THE SAME VALUE OF CURRENT ARE APPLID TO ALL CONTACTS AT THE SAME TIME IN ONCE, SET THE CURRENT TO THE 70 % OF THE RATED CURRENT VALUE.</p> <p>(note 2)</p> <p>THIS PRODUCT HAS FLIP-LOCK CONSTRUCTION. FASTEN FPC ON PCB OR SOMETHING FIXED IF FORCE IN VERTICAL DIRECTION SHALL BE PREDICTED.</p>					
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC4-155198-02
HRS	SPECIFICATION SHEET		PART NO.	FH19SC-**S-0.5SH(05)	
	HIROSE ELECTRIC CO., LTD.		CODE NO	CL580	△ 2/2

2006/07/26 13:36:13 CR. SAITO

DRAWING FOR REFERENCE: This is subject to change without notice



F (20:1)

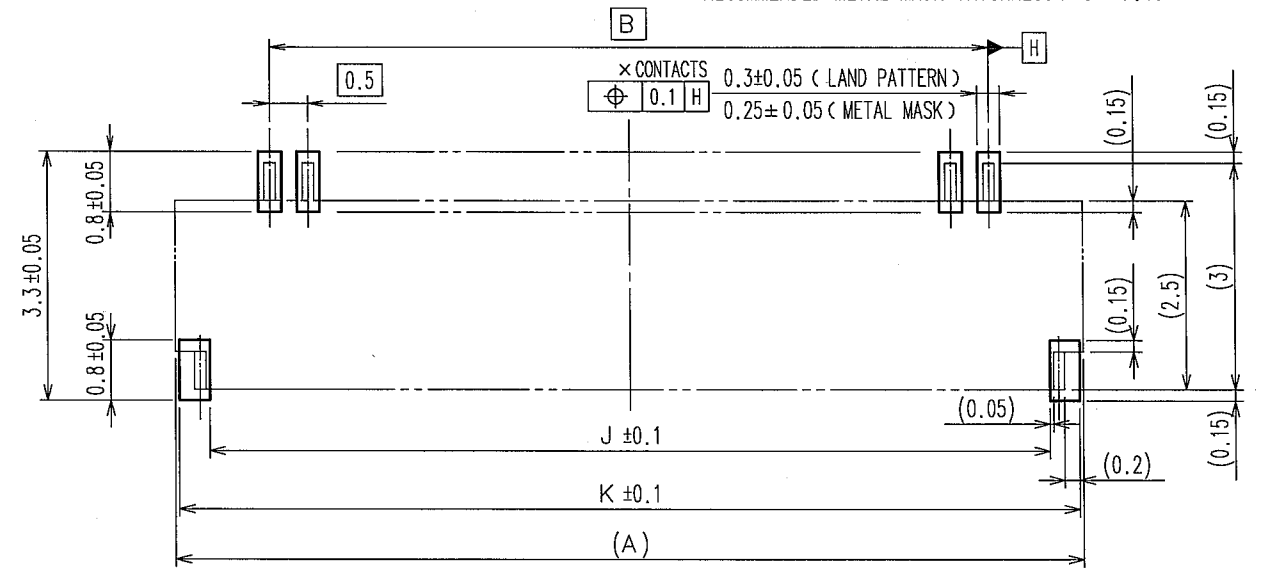


- NOTES
- 1 LEAD CO-PLANARITY INCLUDING REINFORCED METAL FITTINGS SHALL BE 0.1 MAX.
 - 2 DIMENSION: FROM REFERENCE E.
 - 3 DIFFERENCE OF EACH CONTACT LEAD TO BE MAX 0.1.
 - 4 TO BE DELIVERED WITH TAPE AND REEL PACKAGES.
 - 5 NOTE THAT PREVENTIVE HOLE FOR SINK MARK COULD BE ADDED FOR IMPROVEMENT.
 - 6 THE CONTACTS ARE PROTRUDED APPROX. 0.03mm FROM THE HOUSING TOP SURFACE.
 - 7 THE MATERIAL IS PPS BELOW 10 CONTACTS AND LCP ABOVE 11 CONTACTS.

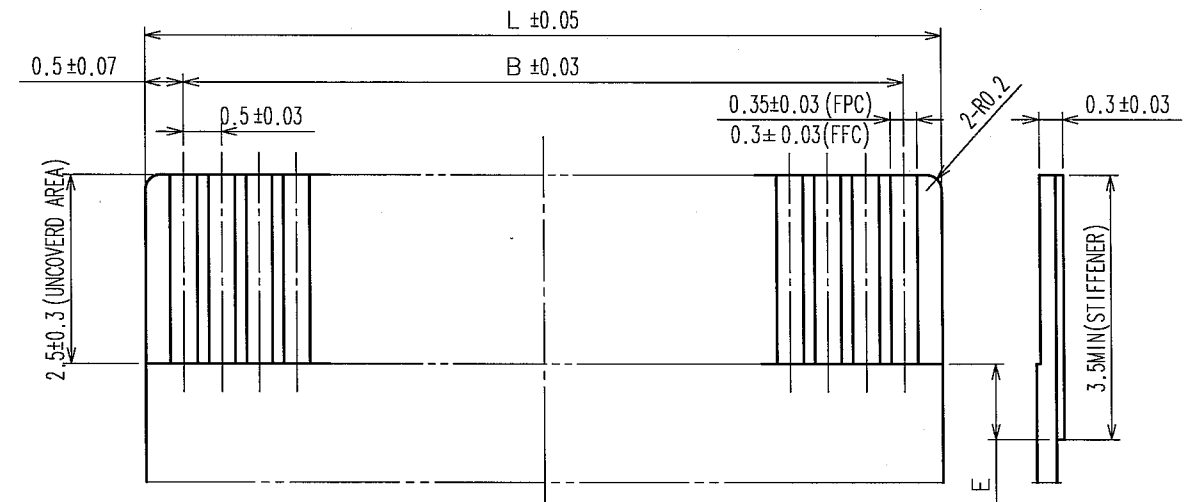
COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE
5	DIS-F-000605	K.F	H.K	05.11.21					

RECOMMENDED LAND PATTERN, METAL MASK (FREE)

RECOMMENDED METAL MASK THICKNESS: $t = 0.10$



RECOMMENDED FPC, FFC (FREE)



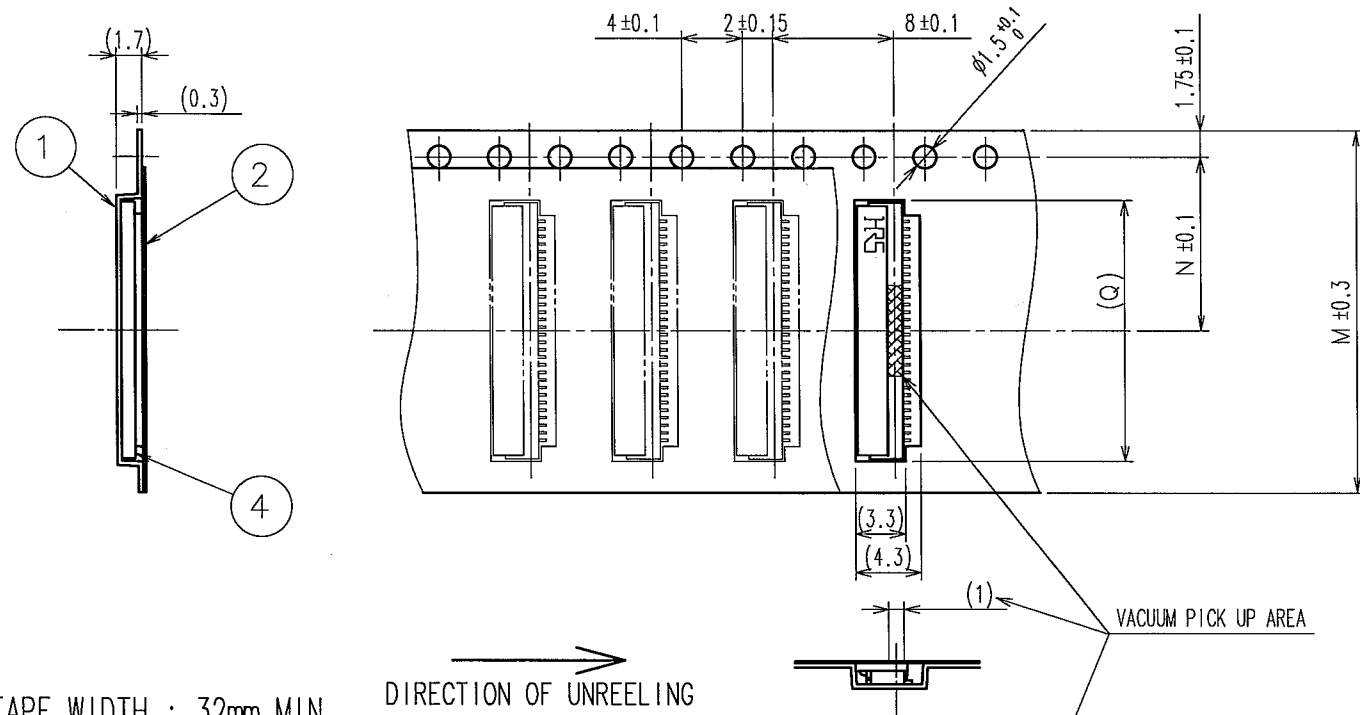
FOR FPC APPLICATION, STIFFENER MATERIAL IS POLYIMID, HEAT CURED ADHESIVE.
 FOR FFC APPLICATION, PAY ATTENTION TO THE TOLERANCE OF FPC THICKNESS AT MATING AREA.
 DIMENSION E SHALL BE 0.5mm MIN. IN CASE THE LENGTH OF STIFFENER IS 3.5mm MAX DUE TO FPC DESIGN.

3	PHOSPHOR BRONZE	GOLD FLASH OVER NICKEL 1μm MIN	5	PHOSPHOR BRONZE (PLATED MATERIAL)	TIN PLATING (REFLOW FINISHED) 1μm MIN OVER COPPER 0.5μm MIN
2	PPS/LCP	BLACK	4	PHOSPHOR BRONZE (PLATED MATERIAL)	TIN PLATING (REFLOW FINISHED) 1μm MIN OVER COPPER 0.5μm MIN
1	LCP	BEIGE			
NO.	MATERIAL	FINISH, REMARKS	NO.	MATERIAL	FINISH, REMARKS

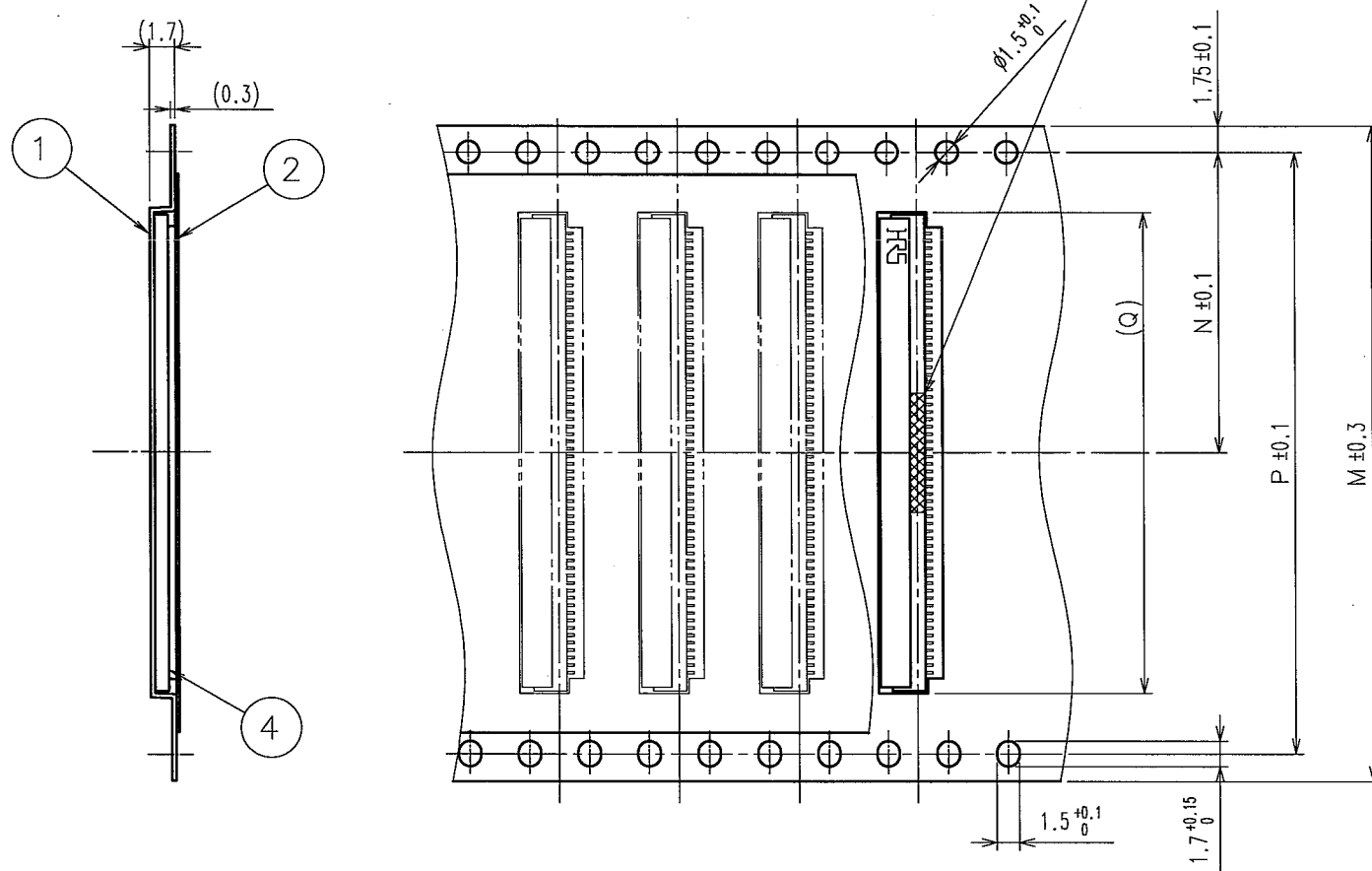
CODE NO. (OLD)	DRAWN	DESIGNED	CHECKED	APPROVED	RELEASED
CL	K. YAMAMOTO	K. FURUKAWA	T. KUWATA	R. TAKAYASU	
	05.08.24	05.08.24	05.08.25	05.08.25	

SCALE	DRAWING NO.	PART NO.
5 : 1	EDC3-155198-02	FH19SC-**-S-0.5SH(05)
UNITS	HRS HIROSE ELECTRIC CO., LTD	CODE NO.
mm		CL580

● TAPE WIDTH : 24mm MAX

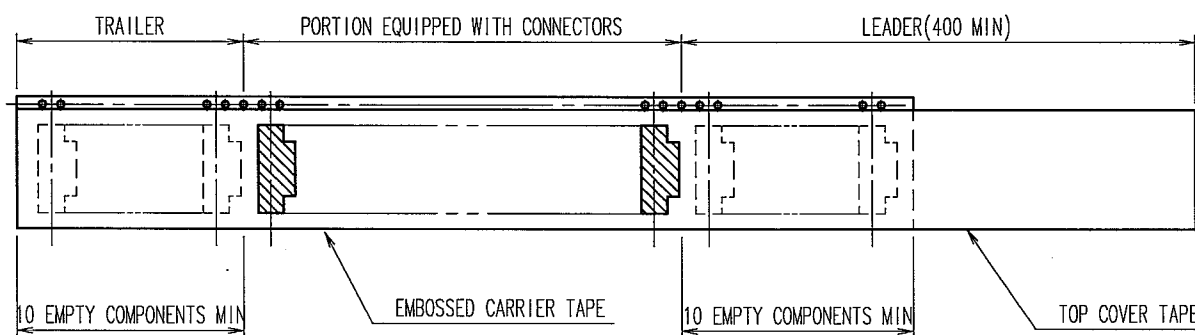


● TAPE WIDTH : 32mm MIN



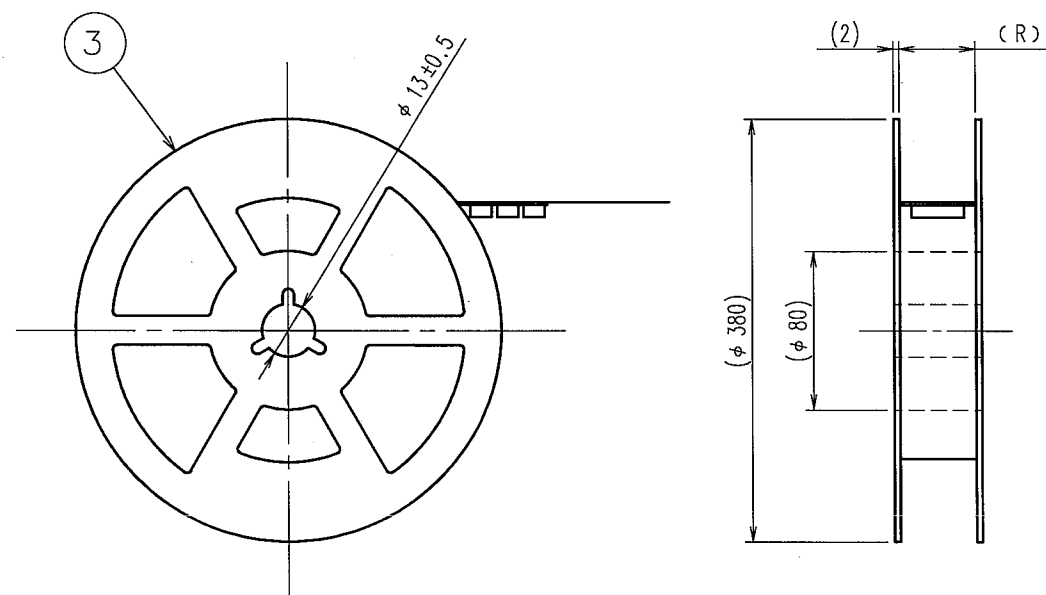
DIRECTION OF UNREELING

VACUUM PICK UP AREA



5				6				7				8			
COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE	
△					△					△					
△					△					△					
△					△					△					

REEL DIMENSION(FREE)



- NOTES 1 THE DIMENSIONS IN PARENTHESES ARE FOR REFERENCE.
 2 PER REEL : 5000 CONNECTORS.
 3 REFER TO JIS C 0806 (PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING.)

2	POLYESTER		4	(CONNECTOR)	
1	POLYSTYRENE		3	POLYSTYRENE	
NO.	MATERIAL	FINISH, REMARKS	NO.	MATERIAL	FINISH, REMARKS
CODE NO. (OLD) CL			DRAWN	DESIGNED	CHECKED
DRAWING FOR PACKING			K.YAMAMOTO	K.FURUKAWA	K.KUWATA
			05.08.24	05.08.24	05.08.25
			APPROVED		RELEASED
			R.TAKAYASU		
			05.08.25		
DRAWING NO. EDC3-155198-02			PART NO. FH19SC-**S-0.5SH(05)		
SCALE 2 : 1			CODE NO. CL580		
UNITS mm			HIROSE ELECTRIC CO., LTD		

