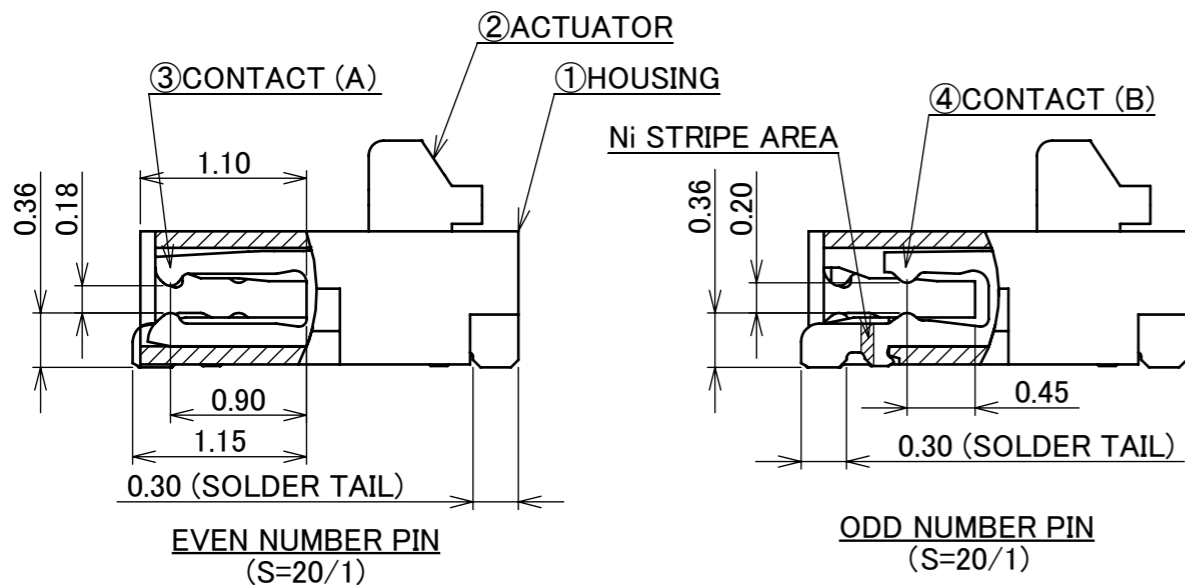
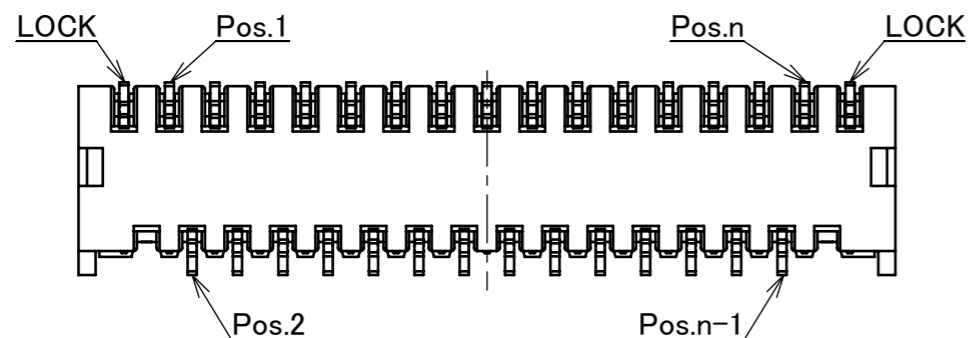
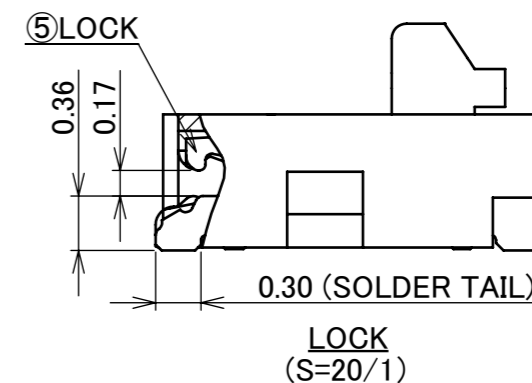
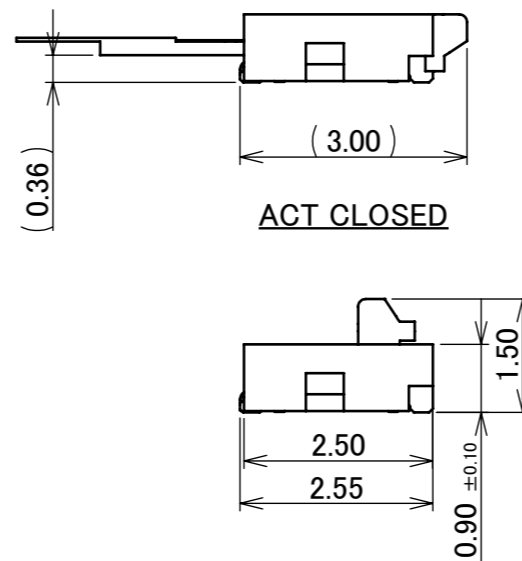
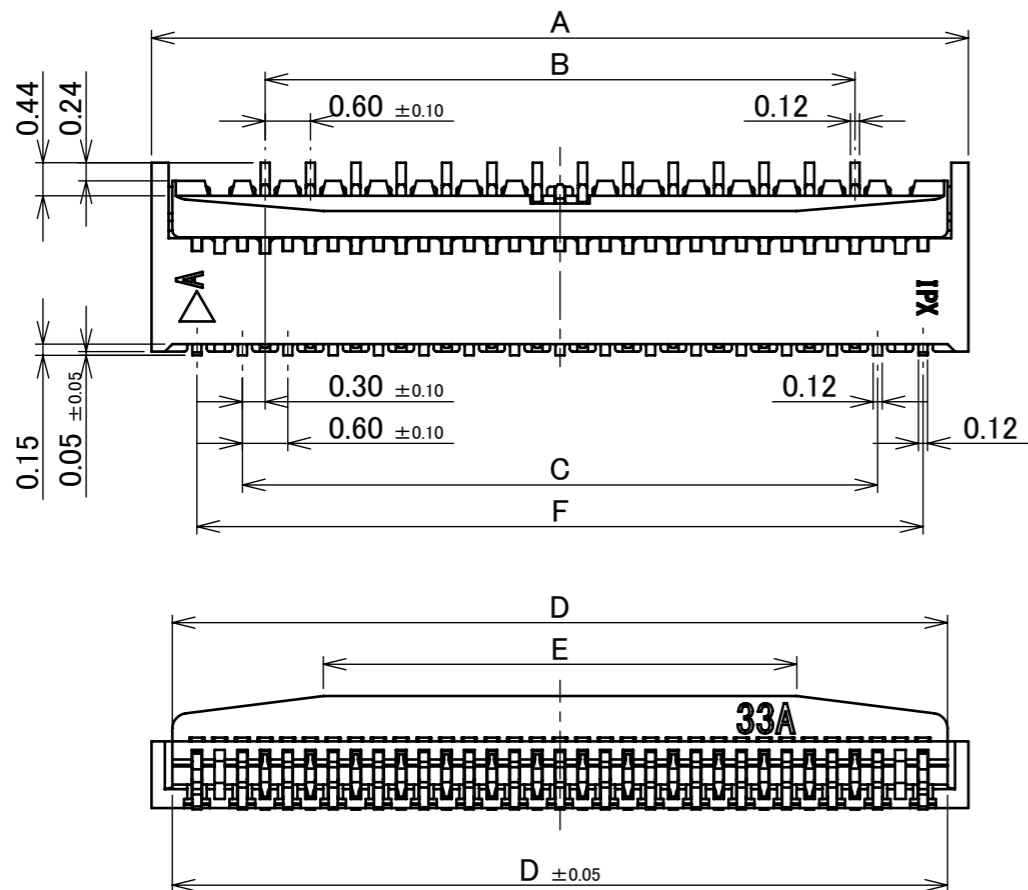




PART NO.	Pos.	A	B	C	D	E	F
20599-009E-01	9P	4.80	1.80	2.40	4.25	2.25	3.60
20599-011E-01	11P	5.40	2.40	3.00	4.85	2.85	4.20
20599-013E-01	13P	6.00	3.00	3.60	5.45	3.45	4.80
20599-015E-01	15P	6.60	3.60	4.20	6.05	4.05	5.40
20599-017E-01	17P	7.20	4.20	4.80	6.65	2.65	6.00
20599-019E-01	19P	7.80	4.80	5.40	7.25	3.25	6.60
20599-021E-01	21P	8.40	5.40	6.00	7.85	3.85	7.20
20599-023E-01	23P	9.00	6.00	6.60	8.45	4.45	7.80
20599-025E-01	25P	9.60	6.60	7.20	9.05	5.05	8.40
20599-027E-01	27P	10.20	7.20	7.80	9.65	5.65	9.00
20599-029E-01	29P	10.80	7.80	8.40	10.25	6.25	9.60
20599-031E-01	31P	11.40	8.40	9.00	10.85	6.85	10.20
20599-033E-01	33P	12.00	9.00	9.60	11.45	7.45	10.80
20599-035E-01	35P	12.60	9.60	10.20	12.05	8.05	11.40
20599-037E-01	37P	13.20	10.20	10.80	12.65	6.65	12.00



NOTES

1. CONTACT POINT : TOP AND BOTTOM CONTACT

CAUTION VISIT OUR WEBSITE FOR LATEST VERSIONS OF INSTRUCTION MANUAL NO. HIM-12007 TO HANDLE THE PRODUCT PROPERLY AND SAFELY.

TABLE 1

PART NO.	FINISH		
20599-0**E-01	CONTACT AREA : Au $0.10 \mu\text{m}$ MIN. OVER Ni $1.00 \mu\text{m}$ MIN. SOLDERING AREA : Au $0.03 \mu\text{m}$ MIN. OVER Ni $1.00 \mu\text{m}$ MIN.		
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
5	LOCK	PHOSPHOR BRONZE	SOLDERING AREA : Au $0.03 \mu\text{m}$ MIN. OVER Ni $1.00 \mu\text{m}$ MIN.
4	CONTACT (B)	PHOSPHOR BRONZE	SEE TABLE 1, WITH Ni STRIPE
3	CONTACT (A)	PHOSPHOR BRONZE	SEE TABLE 1
2	ACTUATOR	LCP	UL94V-0, BEIGE
1	HOUSING	LCP	UL94V-0, BEIGE

REV.	ECN	BY	DATE	APP.	DATE	DATE	DATE	PROJECTION	SERIES No.	CUSTOMER COPY	
13	Z191376	M.M	Oct./15/'19	H.I	ANGLE	$\pm 2^\circ$	6 OVER 30 MAX.	$\pm 0.3$	R1	CUSTOMER COPY	
12	Z181440	T.O	Nov./02/'18	H.I	6 MAX.	$\pm 0.2$	30 OVER 120 MAX.	$\pm 0.5$			
11	Z181290	T.O	Oct./01/'18	H.I	GENERAL TOLERANCE.			MINIFLEX® 3-BFN LK TYPE	SCALE	I-PEX	
10	Z170966	D.F	Aug./23/'17	H.I	DWG.	R.Takei	DATE		2013/07/18		10:1
9	Z170541	H.A	May/10/'17	Y.S	CHK.	J.Tateishi	DATE	2013/07/22	UNIT		mm
8	Z161237	H.A	Oct./06/'16	Y.S	APP.	E.Kawabe	DATE	2013/07/23	SIZE		A3
REVISION RECORD					DWG. No.			20599	SHEET	1/5	REV. 13

ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT)
RATING AMPERAGE	0.3A DC (PER CONTACT)
OPERATING TEMPERATURE	233~358K(-40°C~85°C)
OPERATING HUMIDITY	20~80%RH (NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : $\triangleleft$ 40mohm MAX.
INSULATION RESISTANCE	100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	20TH CYCLES
ACTUATOR LOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20TH CYCLES : 0.3N(31gf) $\times$ (n + 2) MAX.
ACTUATOR UNLOCKING FORCE (INITIAL / 20TH CYCLES)	INITIAL / 20TH CYCLES : 0.02N(2gf) $\times$ (n + 2) MIN.
FPC RETENTION FORCE (INITIAL / AFTER TEST)	INITIAL : 0.13N(13gf) $\times$ n + 1.0N MIN. / AFTER TEST : 0.10N(10gf) $\times$ n + 1.0N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-1861
TEST REPORT	TR-13085
PACKING STANDARD	PST-13035
INSTRUCTION MANUAL	HIM-12007
APPEARANCE CRITERIA No.	QLS-A***

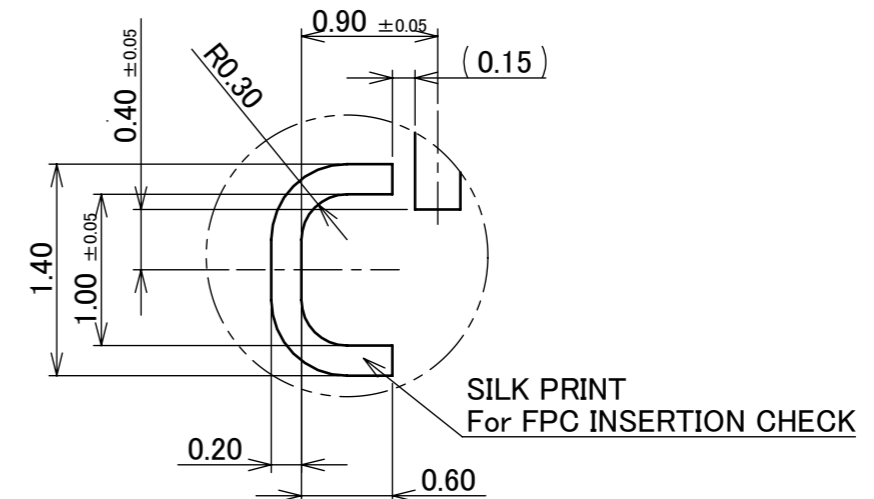
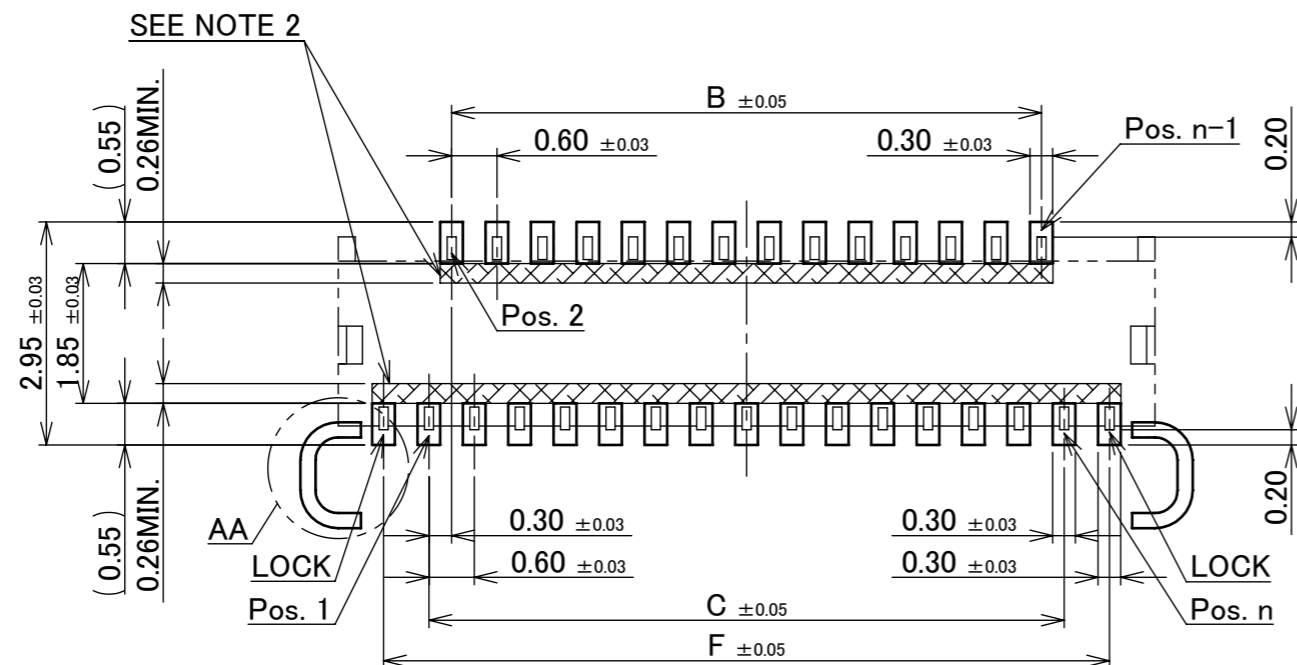
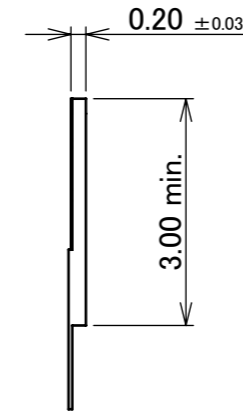
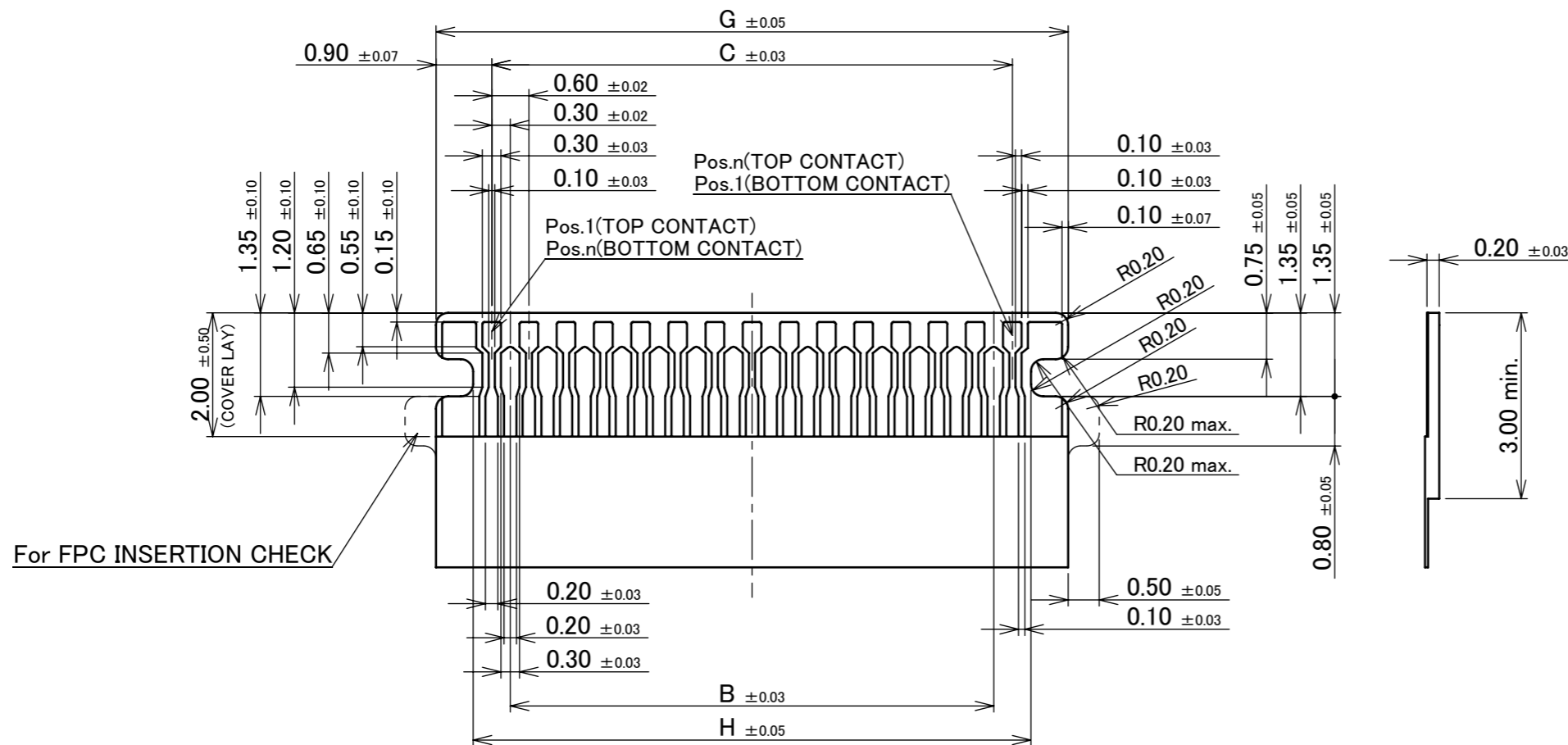
※ "n" IS THE NUMBER OF PIN

ANGLE	$\pm 2^\circ$	6 OVER 30 MAX.	$\pm 0.3$	PROJECTION 	SERIES No. R1	CUSTOMER COPY
6 MAX.	$\pm 0.2$	30 OVER 120 MAX.	$\pm 0.5$			
GENERAL TOLERANCE.				TITLE MINIFLEX <sup>®</sup> 3-BFN LK TYPE	SCALE	UNIT mm
DWG.	DATE					
CHK.	DATE					
APP.	DATE					
				DWG. No.	20599	SIZE A3
				SHEET 2/5		REV. 13

PART NO.	Pos.	B	C	F	G	H
20599-009E-01	9P	1.80	2.40	3.60	4.20	3.00
20599-011E-01	11P	2.40	3.00	4.20	4.80	3.60
20599-013E-01	13P	3.00	3.60	4.80	5.40	4.20
20599-015E-01	15P	3.60	4.20	5.40	6.00	4.80
20599-017E-01	17P	4.20	4.80	6.00	6.60	5.40
20599-019E-01	19P	4.80	5.40	6.60	7.20	6.00
20599-021E-01	21P	5.40	6.00	7.20	7.80	6.60
20599-023E-01	23P	6.00	6.60	7.80	8.40	7.20
20599-025E-01	25P	6.60	7.20	8.40	9.00	7.80
20599-027E-01	27P	7.20	7.80	9.00	9.60	8.40
20599-029E-01	29P	7.80	8.40	9.60	10.20	9.00
20599-031E-01	31P	8.40	9.00	10.20	10.80	9.60
20599-033E-01	33P	9.00	9.60	10.80	11.40	10.20
20599-035E-01	35P	9.60	10.20	11.40	12.00	10.80
20599-037E-01	37P	10.20	10.80	12.00	12.60	11.40

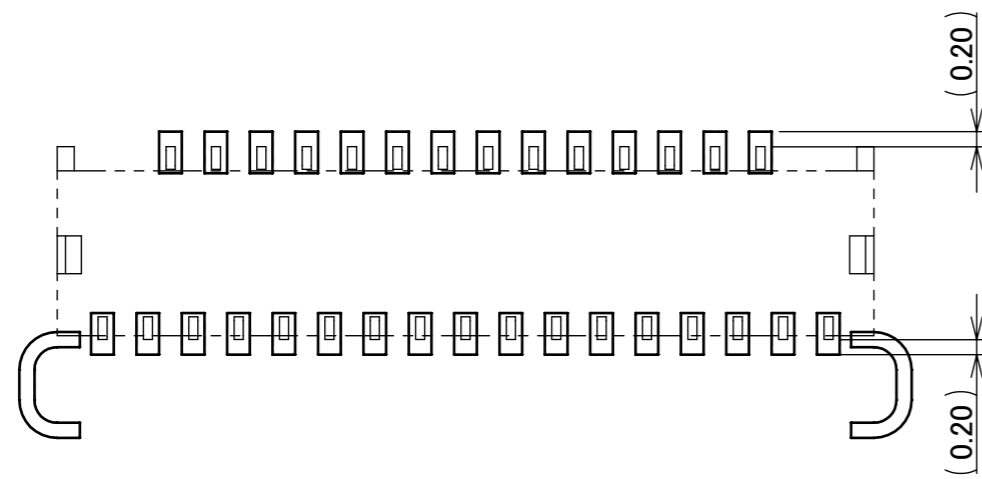
NOTES

2. SOLDER RESIST SHALL BE APPLIED TO PREVENT SHORT CIRCUITS WHEN PLACING SIGNAL LINES ON GROUND AREA.

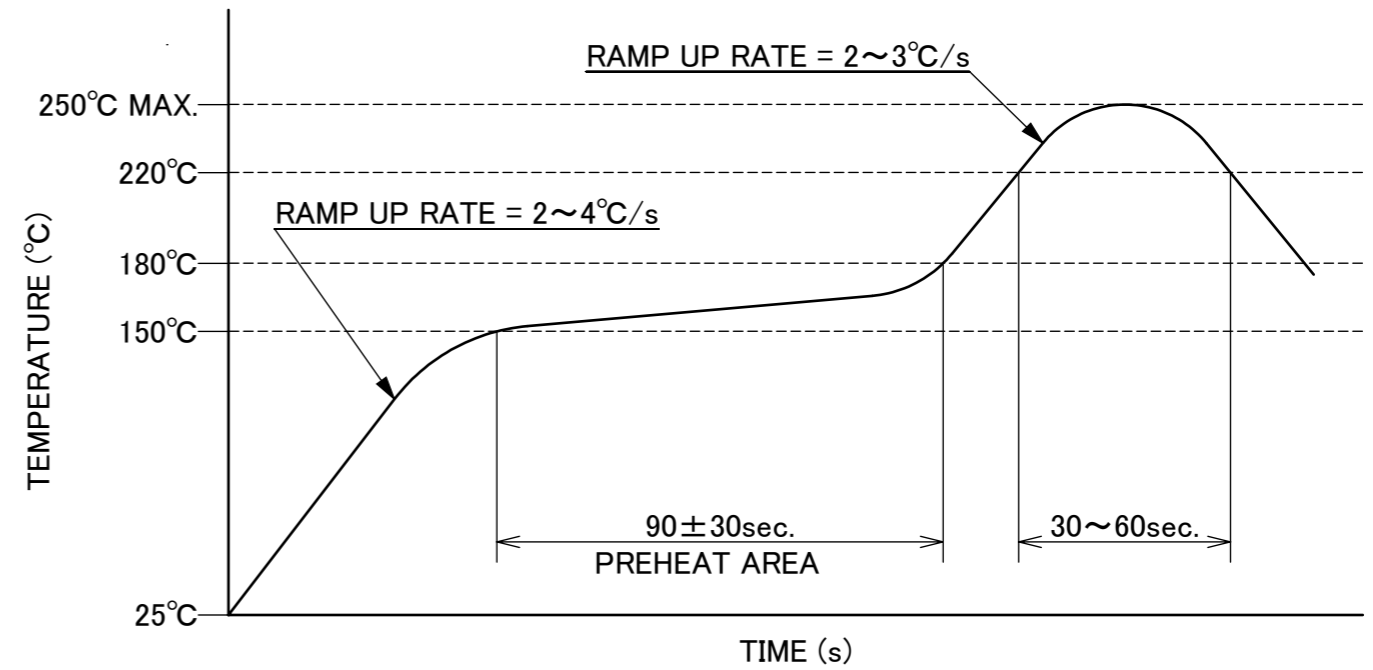


DETAIL AA  
(S=20/1)

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION	SERIES No.	CUSTOMER COPY
	6 MAX.	±0.2	30 OVER 120 MAX.	⊕	R1	
GENERAL TOLERANCE.				TITLE	SCALE	I-PEX
DWG.	DATE			MINIFLEX® 3-BFN	10:1	
CHK.	DATE			LK TYPE	UNIT	
APP.	DATE			DWG. No.	mm	
				20599	SIZE	SHEET 3/5 REV. 13
					A3	



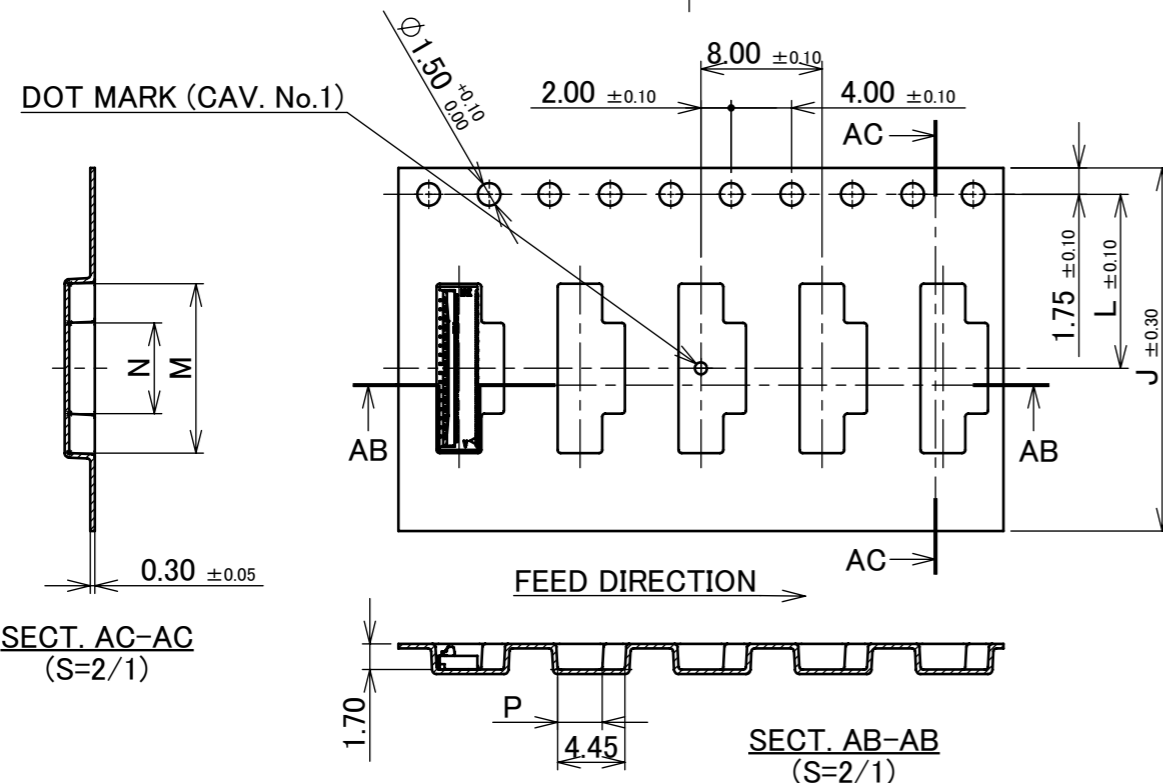
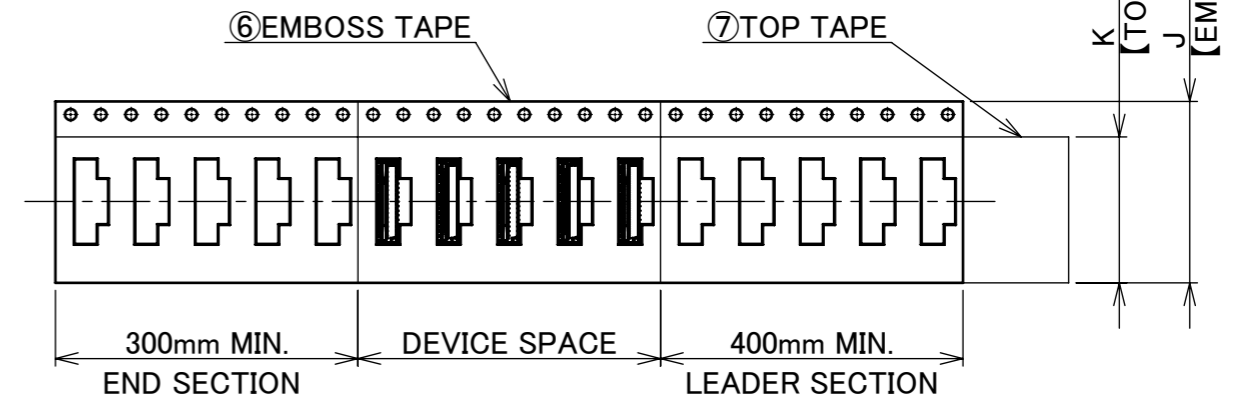
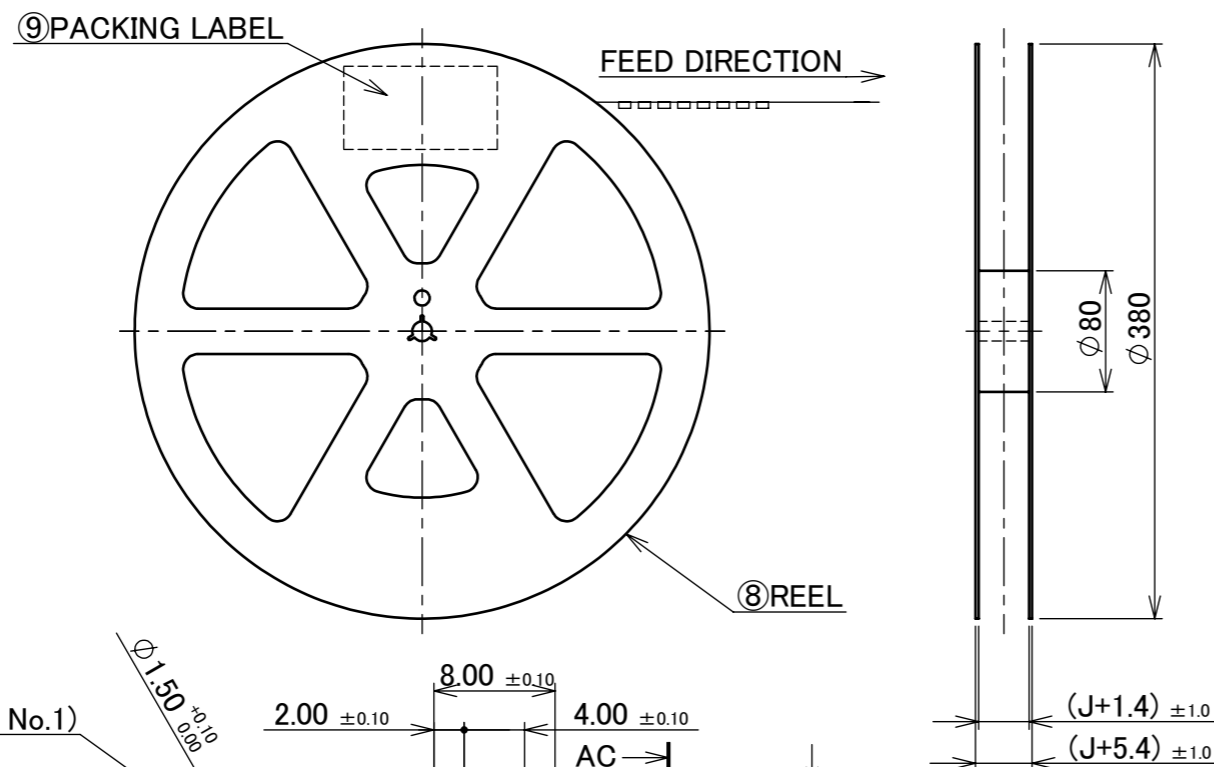
CONNECTOR ON RECOMMENDED PCB LAYOUT



REFLOW TEMPERATURE PROFILE  
 SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION 	SERIES No. R1	CUSTOMER COPY
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5			
GENERAL TOLERANCE.				TITLE	SCALE	 SHEET 4/5 REV. 13
DWG.	DATE		MINIFLEX® 3-BFN LK TYPE	10:1		
CHK.	DATE			UNIT		
APP.	DATE			mm		
				DWG. No.	SIZE	
				20599	A3	

DEVICE P/N	J	K	L	M	N	P	QTY. PER EMBOSS REEL (PIECES / REEL)	QTY. PER PACKING CARTON (REELS / CARTON)	
20599-009E-01	16.0	13.3	7.50	5.00	3.00	2.75	5,000 / REEL	7 / CARTON = 35,000	
20599-011E-01				5.60					
20599-013E-01				6.20					
20599-015E-01				6.80	4.00				
20599-017E-01				7.40					
20599-019E-01				8.20					
20599-021E-01	24.0	17.3	11.50	8.80	6.00	2.95		5,000 / REEL	5 / CARTON = 25,000
20599-023E-01				9.40					
20599-025E-01				10.00					
20599-027E-01				10.60					
20599-029E-01				11.20					
20599-031E-01				11.80					
20599-033E-01				12.40					
20599-035E-01	19.3			13.00	8.00				
20599-037E-01				13.60					



- NOTES.
- TAPING SPECIFICATION FOLLOWS JIS C 0806 (IEC 60286-3).
  - MAKE EMPTY SECTION OF LEADER AND END ON EACH END OF THE TAPE.
  - TOP TAPE SHALL NOT STICK OUT FROM EMBOSS TAPE.
  - TOP TAPE SHALL NOT COVER FEED HOLE.

NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
9	PACKING LABEL	-	-
8	REEL	PS	BLACK
7	TOP TAPE	PET t=0.061 TRANSPARENCY	ANTI-STATIC TYPE ADHESIVE TYPE
6	EMBOSS TAPE	PS t=0.3 TRANSPARENCY	ANTI-STATIC TYPE

ANGLE	±2°	6 OVER 30 MAX.	±0.3	PROJECTION	SERIES No.	CUSTOMER COPY
6 MAX.	±0.2	30 OVER 120 MAX.	±0.5		R1	
GENERAL TOLERANCE.				TITLE	I-PEX	
DWG.	DATE		MINIFLEX® 3-BFN LK TYPE			
CHK.	DATE		SCALE			
APP.	DATE		UNIT			
				DWG. No.	20599	mm
				SIZE	A3	SHEET 5/5 REV. 13