

REV.	ECR/ECN No.	DESCRIPTION	DRAWN/DATE	CHECKED/DATE	APPROVED/DATE
H	/	Add plating specification	May 2019-01-07	Rain 2019-01-07	Xiaohong.zhu 2019-01-07

NO.	COMPONENTS	MATERIALS	SPECIFICATION:FINISH/COLOR	QTY.
1	SLIDER	GLASS FILLED LCP, UL94V-0	BLACK	1
2	HOUSING	GLASS FILLED LCP, UL94V-0	NATURE	1
3	ANCHOR-PLATE	BRASS, T=0.40±0.01mm	ALL OVER 2um MIN. MATTE TIN UNDERPLATING:1um NICKEL MIN.	2
4	CONTACT	PHOSPHOR BRONZE, T=0.15±0.01mm	CONTACT AREA SEE "NOTE" AND FOOT UNDERPLATING:1um NICKEL MIN.	N
5	MYLAR	L7.50*W5.00*H0.10	BROWN	1

NOTE:

- MATERIAL:**
HOUSING:LCP.NATURAL.UL94V-0.
COVER:LCP.BLACK.UL94-0.
CONTACT:PHOSPHOR BRONZE;T=0.15mm.
STATOR:BRASS;T=0.40mm.
- PLATING:**
CONTACT:SEE "PART NO. LEGEND"
FOOT UNDERPLATING:1um NICKEL MIN.
STATOR:ALL OVER 2um MIN. MATTE TIN UNDERPLATING:1um NICKEL MIN.
- COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND SONY SS-00259.**
- "▽" MARK IS CPK AND X-R DIMENSION
- "▼" MARK IS IMPORTANT DIMENSIONS

4.PART NO. LEGEND:
HRS-F31S-1A7*1-110**

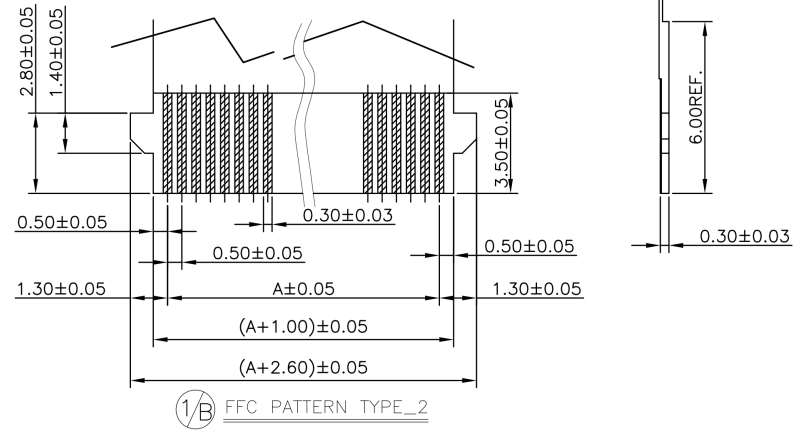
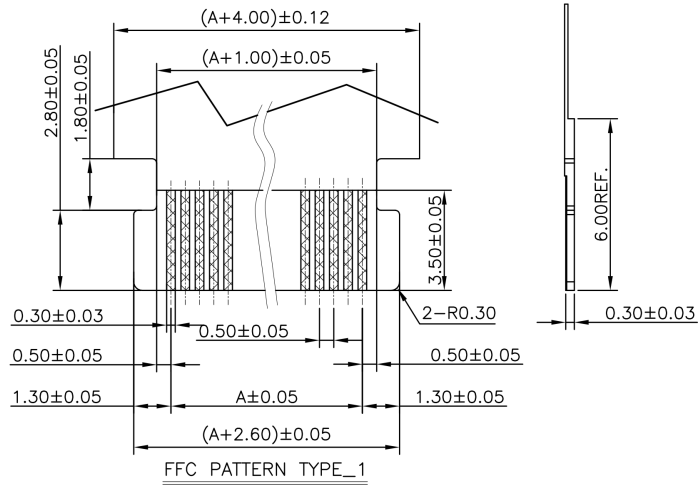
- NO. OF POSITIONS
- 7H:PHOSPHOR BRONZE 0.075um MIN Au(Au Area)
- 7L:PHOSPHOR BRONZE G/T(Contact area 0.05um Au MIN.; Solder area 2um Sn MIN.)

UNLESS OTHERWISE SPECIFIED TOLERANCES				ANGLE OF PROJECTION	
X.	±0.30	X. '	± 5'		
X.X	±0.25	X.X '	± 4'		
X.XX	±0.20	X.XX '	± 3'	DOC TYP Customer Drw DRAWN DATE May 2019-01-07 DESIGN DATE May 2019-01-07 CHECKED DATE Rain 2019-01-07 APPROVED DATE Hongkui.Liu 2019-01-07	
X.XXX	±0.15	X.XXX '	± 2'		
LINEAR DIMS		ANGLES DIMS		TITLE: Assembly Drawing For 0.5 PITCH FPC CONN. ZIF SMT TYPE STRAIGHT	
DWG NO.: A-S0127				SIZE	PART NUMBER: A4 HRS-F31S-1A7*1-110**
MATERIAL		SEE NOTES		REV.	H
FINISHED		SEE NOTES		SCALE	1:1 UNIT : mm SHEET 1 OF 3

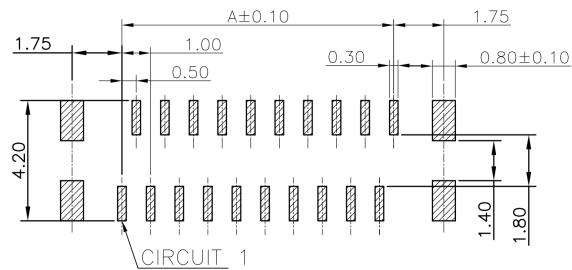
Horus Int. Electronics Co., LTD.
HorusTech Electronics Co., LTD.

HorusTech

1. FFC PATTERN DIMENSION



2. P.C.B LAYOUT, TOL: ± 0.05



DIMENSION LIST:

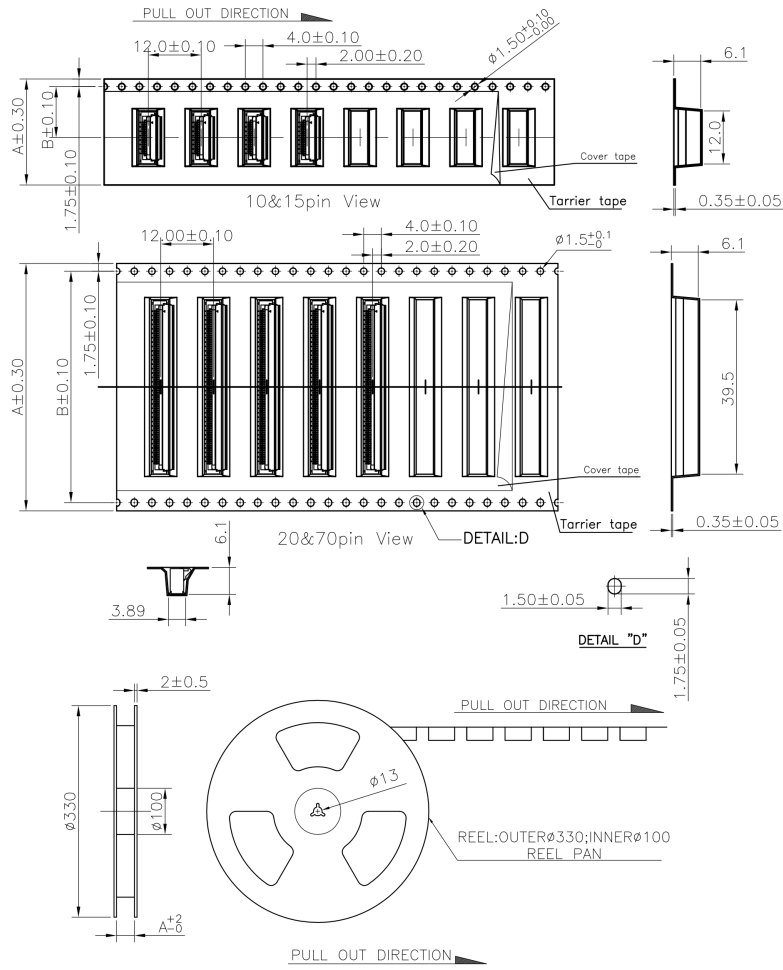
NO. OF POS.	A	B	1B C	2B D	1C E
10	4.50	9.20	7.12	5.60	7.04
20	9.50	14.20	12.12	10.60	12.04
30	14.50	19.20	17.12	15.60	17.04
40	19.50	24.20	22.12	20.60	22.04
50	24.50	29.20	27.12	25.60	27.04
60	29.50	34.20	32.12	30.60	32.04
70	34.50	39.20	37.12	35.60	37.00

UNLESS OTHERWISE SPECIFIED TOLERANCES				ANGLE OF PROJECTION	
X.	± 0.30	X. °	$\pm 5'$		
X.X	± 0.25	X.X °	$\pm 4'$		
X.XX	± 0.20	X.XX °	$\pm 3'$	DOC Typ Customer Drw	
X.XXX	± 0.15	X.XXX °	$\pm 2'$	DRAWN DATE May 2019-01-07	
LINEAR DIMS		ANGLES DIMS		DESIGN DATE May 2019-01-07	
DWG NO.: A-S0127				CHECKED DATE Rain 2019-01-07	
MATERIAL SEE NOTES		APPROVED DATE Hongkui.Liu 2019-01-07		TITLE: Assembly Drawing For 0.5 PITCH FPC CONN. ZIF SMT TYPE STRAIGHT	
FINISHED SEE NOTES				SIZE PART NUMBER: A4 HRS-F31S-1A7*1-110**	
				REV. H	
				SCALE 1:1 UNIT : mm SHEET 2 OF 3	

Horus Int. Electronics. Co., LTD.
HorusTech Electronics Co., LTD.

TITLE: Assembly Drawing For 0.5 PITCH FPC CONN. ZIF SMT TYPE STRAIGHT
 SIZE PART NUMBER: A4 HRS-F31S-1A7*1-110**
 REV. H
 SCALE 1:1 UNIT : mm SHEET 2 OF 3

1. PACKING INTO REEL:



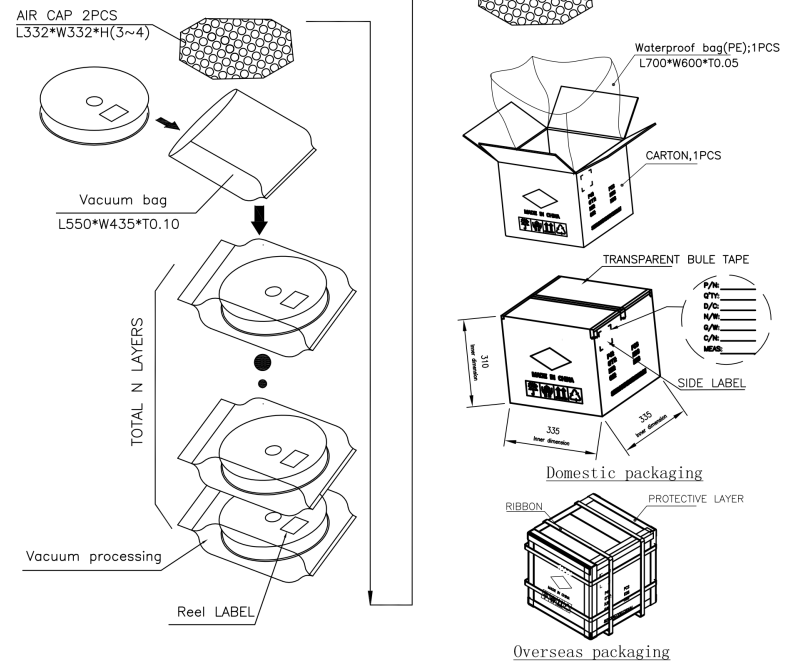
5. QTY LIST:

NO.	10&15pin	20&30pin	40&50pin	60&70pin
A	24.00	32.00	44.00	56.00
B	14.20	28.40	40.40	52.40
N	10	8	6	5
TOTAL(PCS)	9000	7200	5400	4500

NOTES:

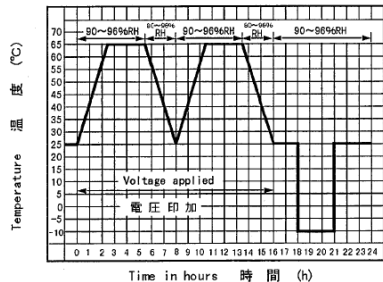
- MATERIAL:
 - CARRY TAPE:HIPS,T=0.35mm,CLEAR
 - REEL:HIPS,BLUE.
 - SHIM:PE,CLEAR.
- PRIMARY PACKING:900PCS/REEL.
- SECONDARY PACKING:"N"REELS/CARTON ("TOTAL"=N*900/CARTON).
- PEELING RESISTANCE: 0.1N~0.7N(10~70gf);
 PEELING ANGLE: 165°~180°;
 PEELING SPEED: 300mm/minutes.

2:PACKING INTO OUTER BOX



UNLESS OTHERWISE SPECIFIED TOLERANCES				ANGLE OF PROJECTION	
X.	±0.30	X. ' .	± 5'		
X.X	±0.25	X.X ' .	± 4'		
X.XX	±0.20	X.XX ' .	± 3'	DOC TYP Customer Drw	
X.XXX	±0.15	X.XXX ' .	± 2'	DRAWN DATE May 2019-01-07	
LINEAR DIMS			DESIGN DATE May 2019-01-07		
DWG NO.: A-S0127			CHECKED DATE Rain.Han 2019-01-07		
MATERIAL SEE NOTES			APPROVED DATE Leo.Liu 2019-01-07		
FINISHED SEE NOTES					

		Horus Int. Electronics Co., LTD.	
		HorusTech Electronics Co., LTD.	
TITLE: Assembly Drawing For 0.5 PITCH FPC CONN. ZIF SMT TYPE STRAIGHT			
SIZE	PART NUMBER:		REV.
A4	HRS-F31S-1A7*1-110**		H
SCALE	1:1	UNIT : mm	SHEET 3 OF 3

序号 NO.	项目 Item	测试方法 Test conditions	规格要求 Specifications
	nce	配合合适的 FPC, -40±3°C 中放置时间 96H 后取出, 1~2 小时常温放置后进行测试。 Mate applicable FPC ,after -40±3°C, the time of 96H was removed, and the test was conducted at room temperature for 1~2 hours.	1. 接触阻抗: 50mΩ Max. 2. 绝缘阻抗: 500 MΩ Min. 3. 耐电压: 无击穿, 短路 4. 外观: 无异常
	Resistance	配合合适的 FPC, 105±2°C 中放置时间 96H 后取出, 1~2 小时常温放置后进行测试。 Mate applicable FPC ,after 105±2°C, the time of 96H was removed, and the test was conducted at room temperature for 1~2 hours.	1. Contact Resistance: 50mΩ Max. 2. Insulation Resistance : 500 MΩ Min. 3. Dielectric withstanding voltage: No Breakdown. 4. No abnormal appearance
5	耐湿性 Humidity	配合合适的 FPC, 40±3°C、相对湿度 90~95% 中放置时间 96H 后取出, 1~2 小时常温放置后进行测试。 Mate applicable FPC ,40±3°C, relative humidity 90~95% in the time of 96H after removal, 1~2 hours after room temperature for testing.	1. Contact Resistance: 50mΩ Max. 2. Insulation Resistance : 500 MΩ Min. 3. Dielectric withstanding voltage: No Breakdown. 4. No abnormal appearance
6	盐雾试验 Salt Spray	配合合适的 FPC, 温度 35±2°C; 盐水比重 5±1% 喷雾试验, 试验后常温水洗干燥后进行测试。 A: 镀金 48h B: 镀锡 24h C: 单 pin 端子 48h Mate applicable FPC, the temperature of 35±2°C, the proportion of salt water was 5±1% the test was carried out at room temperature after washing and drying. A: gold plating 48H B: tin 24h C: single pin terminal 48H	1. 接触阻抗: 50mΩ Max. 2. 绝缘阻抗: 500 MΩ Min. 3. 耐电压: 无击穿, 短路 4. 外观: 无异常
7	冷热冲击 Thermal Shock	配合合适的 FPC, -55±3°C; 85±2°C 的温度下各放置 30 分钟, 共进行 5 次循环 Mate applicable FPC, -55±3°C, 85±2°C, 30 minutes, 5 cycles were performed. 1: -55°C 30 minutes 2: +85°C 30 minutes	1. Contact Resistance: 50mΩ Max. 2. Insulation Resistance : 500 MΩ Min. 3. Dielectric withstanding voltage: No Breakdown. 4. No abnormal appearance
8	耐湿性 (温湿度循环) Humidity (Temperature and Humidity Cycle)	配合合适的 FPC, 依照下面曲线完成 5 次循环试验。 Mate applicable FPC, complete the 5 cycle test according to the curve below. 	1. Contact Resistance: 50mΩ Max. 2. Insulation Resistance : 500 MΩ Min. 3. Dielectric withstanding voltage: No Breakdown. 4. No abnormal appearance
9	沾锡性 Solderability	端子焊脚和固定片前端 0.3mm, 沾锡温度 245±5°C (Sn: Lead Free); 时间 3±0.5S Terminal welding feet and fitting nail front 0.3mm, soldering temperature 245±5°C (Sn: Lead Free); time 3±0.5S	吃锡饱满, 在 95% 以上 95% of immersed area must show no voids, pin holes
10	焊锡耐热性 Resistance to Soldering Heat	端子焊脚和固定片前端 0.3mm, 烙铁温度 350±10°C (Sn: Lead Free); 时间 10+1/-0 S Terminal welding feet and fitting nail front 0.3mm, soldering Iron temperature 350±10°C (Sn: Lead Free), time: 10+1/-0 S	共面度 0.10mm Max. 满足电气性能, 外观无异常, Coplanar degree 0.10mm Max.
11	Reflow	预备加热时间 Pre-heating time: 170°C~190°C 60~180s。 焊锡温度时间 Soldering Temperature Time: 260°C 10sMAX.	Meet the electrical properties , No abnormal appearance.
12	耐溶剂 Solvent	将产品放入异丙基酒精容器中 90 秒后取出。 Product into the isopropyl alcohol container removed after 90 seconds.	满足电气性能, 外观无异常。 Meet electrical performance No abnormal appearance.
本制品不含 SS-00259 和 ROHS 禁止使用的环境物质 This product does not contain SS-00259 and ROHS banned the use of environmental substances			
制品仕様书 Product specification		Part name	Pitch0.5 FPC/FFC vertical lift cover type SMT H5.8 series
Horus Int. Electronics. Co., LTD. HorusTech Electronics. Co., LTD.		Part No.	HRS-F31S-1A7*1-110** 3/6
Document No. : IS.EQC.034	Date: 2017/03/22	Rev. : F	Written by: May Checked by: Rain Approved by: Xiaohong.Zhu

6. 包装 Packing

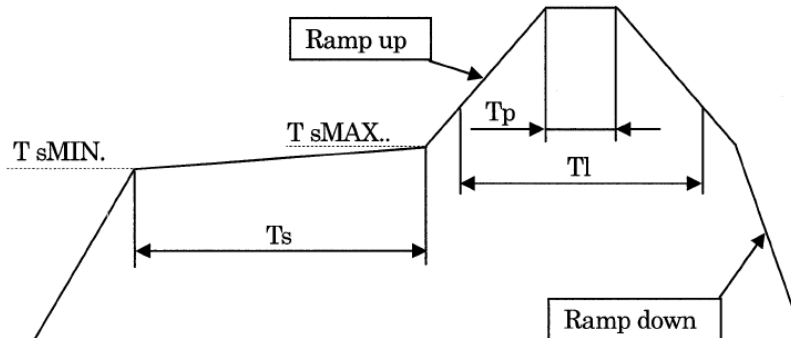
参见捆包图。See the drawing

7. 修改内容 Change content

版本 Rev.	改正日期 Modify date	改正内容 Modifications	Written by	Checked by
A	2014/07/10	New	May	Rain
B	2014/11/08	增加操作说明 (Increase operation instructions)	May	Rain
C	2015/12/29	更新为中英对照版本	May	Rain
D	2016/04/07	修正接触电阻参数 Modify contact resistance parameters	May	Rain
E	2016/06/30	增加掀盖作用力测试操作示意图及注意事项 Increase lift force test operation schematic diagram and matters needing attention	May	Rain
F	2017/3/22	修正焊锡温度条件及耐热性测试条件 Modify the test conditions	Mat	Rain

Reflow Condition:

Profile Feature	Lead-free Eutectic Assembly
温度上升 Ramp up Rate(Tsmax to Tp)	:1~4°C/S
. Pre-heat Ts MIN. Ts MAX. Time(Ts MIN. TO Ts MAX.)	:170°C MIN :190°C MAX :60~180S
T 1 温度 (temperature) 时间 (time)	:225°C MIN :60~150S
T p(Peak) 温度 (temperature) 时间 (time)	:260°C MAX(255°C MIN.) :10S MAX


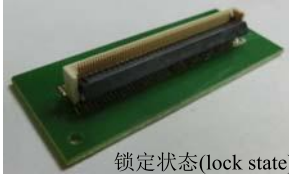
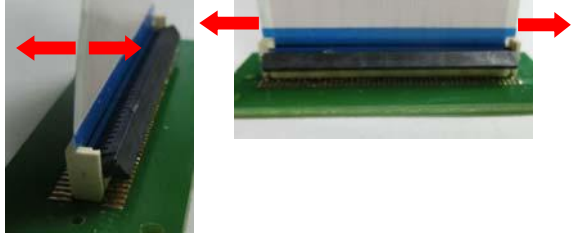
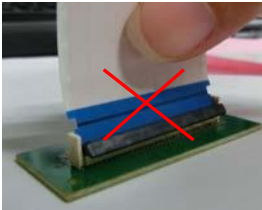
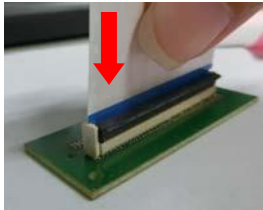
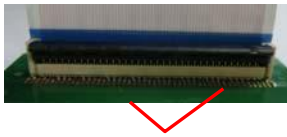
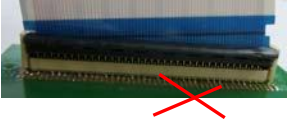
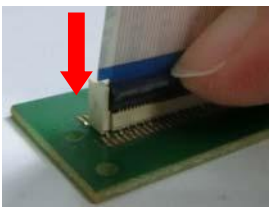
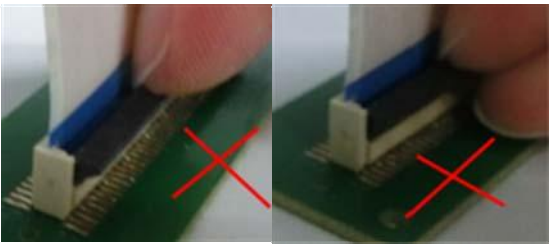


本产品不含 SS-00259 和 ROHS 禁止使用的环境物质

This product does not contain SS-00259 and ROHS banned the use of environmental substances

制品仕様书 Product specification	Part name	Pitch0.5 FPC/FFC vertical lift cover type SMT H5.8 series		
Horus Int. Electronics. Co., LTD. HorusTech Electronics. Co., LTD.	Part No.	HRS-F31S-1A7*1-110**	4/6	
Document No.: IS.EQC.034	Date: 2017/03/23	Rev.: F	Written by: May	Checked by: Rain
			Approved by: Xiaohong. Zhu	

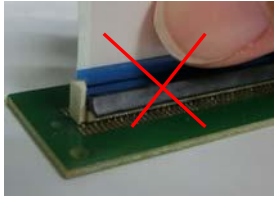
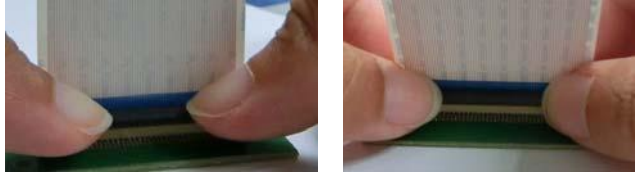
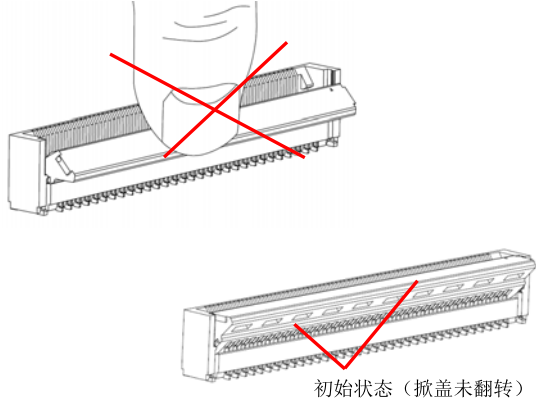
操作说明和注意事项 Operating instructions and matters needing attention

操作说明 (Operating instructions):	注意事项 (Matters needing attention)
<p>解锁状态 盖向上拨动为解锁状态, 即产品装贴后初始状态</p> <p>Unlock state: lose the slider is unlocked, namely the Product after installation initial sata</p> <p>锁定状态: 掀盖向下压为锁定状态, 靠人的食指和拇指甲向下拨动, 可以很简单的操作.</p> <p>Lock state: Open the slider is locked, By the thumb and index finger to pull down, it can be a very simple operation.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;">解锁状态(Unlock state) 锁定状态(lock state)</p> <p>以上必需在连接器已装贴在电路板上的状态下实施 Above must be implemented in a state that the connector is mounted on the circuit board.</p>	<p>1): 对 FFC, 请在其左右方不要施加拉力, 或在其端子间距方向施加撬动力.</p> <p>For FFC, please do not pull the pull force on the left or the right side, or in the direction of the terminal spacing.</p> <div style="text-align: center;">  </div>
<p>2): 插入 FFC: 请在掀盖未打开 (解锁) 状态下进行, FFC 的导体面朝掀盖的反方向, FPC 相对于连接器垂直插入, 要确认 FFC 插到顶住本体的底部. 本产品在设计上, 掀盖不能打开, 所以在其上面不要施加超出此范围的力, 否则会出现 FFC 不能插入或插入不到底或插入倾斜现象.</p> <p>Insert the FFC: Please do not open the slider is not opened (lock state), FFC the opposite direction of the conductor face lift, FPC relative to the connector vertical insertion, to confirm the FFC plug into the bottom of the body. This product in the structure design, lift the lid can not be opened, so in the above, do not apply force beyond this range, otherwise it will appear FFC can not insert or insert into the tilt phenomenon.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>	<p>2): 请将 FFC 正确地插入连接器的插入口. 要确认 FFC 插到顶住本体的底部, 如果不正确的插入, 会导致短路, 导通不良. 插入 FFC 时, 不要用力擦蹭连接器插入口的下面, 否则端子会与 FFC 强烈碰撞, 导致端子变形, FFC 导体剥落等的不良.</p> <p>Please insert the FFC correctly into the insertion port of the connector to confirm that the FFC inserted into the bottom of the body, if not properly inserted, will lead to short circuit, lead to bad. Insert FFC, do not rub the connector into the mouth, or the terminal will be strongly impact with FFC, resulting in terminal distortion, FFC conductor peeling off and so on.</p> <div style="text-align: center;">   </div>
<p>3): 锁 FFC: 向下按掀盖的中间部位, FFC 半插入、或插入错位极大时, 掀盖的卡住状态不佳, 会浮起. 此时, 要按 4) 的拔出方法取出 FFC, 再次从 1) 开始操作. 同时, 进行锁定作业时, 要固定好连接器.</p> <p>Down by the middle part of the lift slider, FFC semi insert, or insert a great when the lift slider of the stuck state is not good, will float.</p> <div style="text-align: center;">  </div>	<p>3): 请避免用手指捏或拔掀盖 (特别是用指甲拨动) 等的操作</p> <p>Please do not use your fingers to pinch or pull off the slider (especially with the nail), and so on.</p> <div style="text-align: center;">  </div>

本制品不含 SS-00259 和 ROHS 禁止使用的环境物质

This product does not contain SS-00259 and ROHS banned the use of environmental substances

制品仕様书 Product specification	Part name	Pitch0.5 FPC/FFC vertical lift cover type SMT H5.8 series		
Horus Int. Electronics. Co., LTD. Horustech Electronics. Co., LTD.	Part No.	HRS-F31S-1A7*1-110**	5/6	
Document No. : IS.EQC.034	Date: 2017/03/23	Rev. : F	Written by: May	Checked by: Rain
			Approved by: Xiaohong. Zhu	

操作说明 (Operating instructions):	注意事项 (Matters needing attention)
<p>4) : 拔出 FFC: 依照 1 的方法进行关闭掀盖;在拔出 FFC 时,请在掀盖完全关闭 (解锁) 状态下进行. 万一在掀盖未完全关闭的状态下, 拔出 FFC, 重新装入 FFC 时, 请确认触点部位是否有附着物.</p> <p>PULL OUT FFC: Close the lift off the slider at 1. When the FFC is pulled, the FFC is pulled out, and if the FFC is not completely closed, the contact area is to be attached.</p> <div style="text-align: center;">  </div>	<p>4) :如果是大 PIN 数的时候请用双手大拇指及食指相互配合按盖子的两端进行下压掀盖进入锁定状态.</p> <p>If this is a big pin number when you use both hands thumb refers to the index finger and cooperate with each other according to the two ends of the cover pressure lift cover into the locking state.</p> <div style="text-align: center;">  </div> <p>5) :未焊板前, 产品掀盖不可随意翻转, 保持初始状态.</p> <p>Before welding plate, product lift cover an optional flip maintain the initial state</p> <div style="text-align: center;">  <p style="text-align: right;">初始状态 (掀盖未翻转)</p> </div>

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