

REV.	ECR/ECN No.	DESCRIPTION	DRAWN/DATE	CHECKED/DATE	APPROVED/DATE
A	/	New Version	May 2016-04-14	Rain 2016-04-14	Hongkui.liu 2016-04-14
B	/	Increase the control	May 2016-12-05	Rain 2016-12-05	Hongkui.liu 2016-12-05

NO.	COMPONENTS	MATERIALS	FINISH/COLOR SPECIFICATION	QUANTITY
1	Housing	GLASS FILLED LCP,UL94V-0	NATURAL	1
2	Contact	PHOSPHOR BRONZE, T=0.20±0.01mm	80u" MIN. TIN PLATING ALL	N

NOTE:

1.MATERIAL:
HOUSING:LCP,NATURAL,UL94V-0.
CONTACT:PHOSPHOR BRONZE,T=0.20mm.

2.PLATING:

CONTACT:80~160u"Matter Tin plating over all,
40~120u"Ni underplating over all

3."▽"NOTATION FOR CPK AND X-R TEST SIZE

4.COMPLIANT TO RoHS DIRECTIVE

2002/95/EC AND SONY SS-00259.

5.PART NO. LEGEND:

HRS-F52L-**7A1-110**-B*00

1:With Mylar
2:Without Mylar

7A:Matter Tin plating

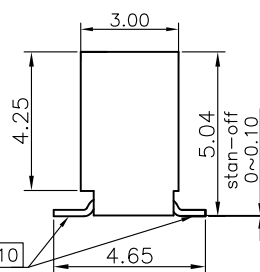
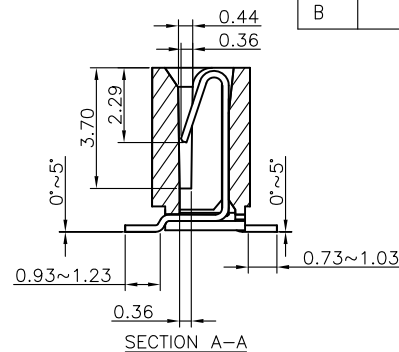
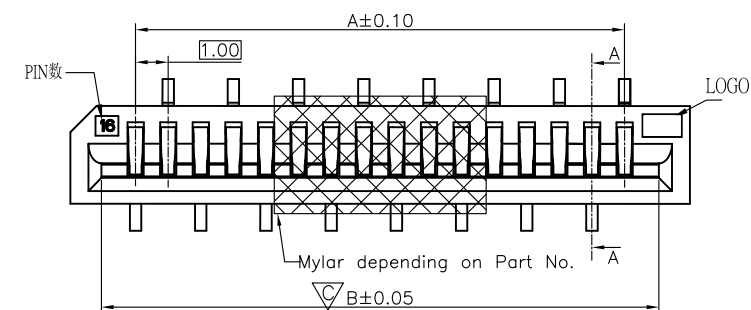
1A:LCP NATURAL

⑦A:LCP NATURAL(水口)

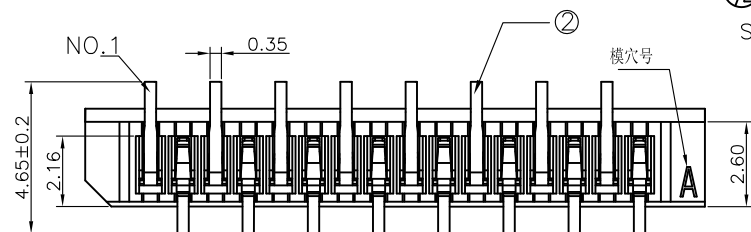
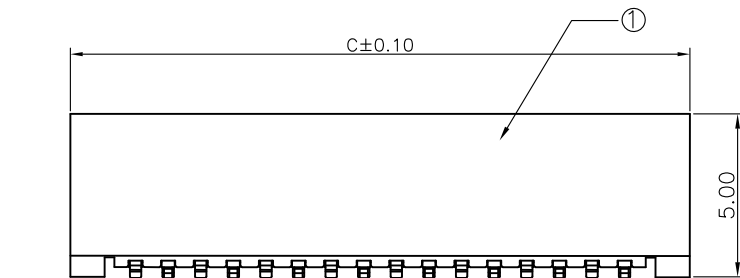
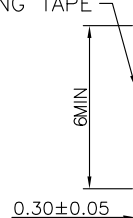
NO. OF POSITIONS

DIMENSION LIST:

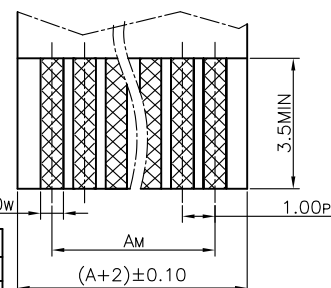
NO.OF POS	A	B	C	NO.OF POS	A	B	C
3	2.00	4.10	6.00	17	16.00	18.10	20.00
4	3.00	5.10	7.00	18	17.00	19.10	21.00
5	4.00	6.10	8.00	19	18.00	20.10	22.00
6	5.00	7.10	9.00	20	19.00	21.10	23.00
7	6.00	8.10	10.00	21	20.00	22.10	24.00
8	7.00	9.10	11.00	22	21.00	23.10	25.00
9	8.00	10.10	12.00	23	22.00	24.10	26.00
10	9.00	11.10	13.00	24	23.00	25.10	27.00
11	10.00	12.10	14.00	25	24.00	26.10	28.00
12	11.00	13.10	15.00	26	25.00	27.10	29.00
13	12.00	14.10	16.00	27	26.00	28.10	30.00
14	13.00	15.10	17.00	28	27.00	29.10	31.00
15	14.00	16.10	18.00	29	28.00	30.10	32.00
16	15.00	17.10	19.00	30	29.00	31.10	33.00



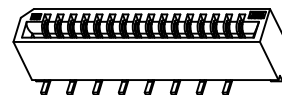
SUPPORTING TAPE



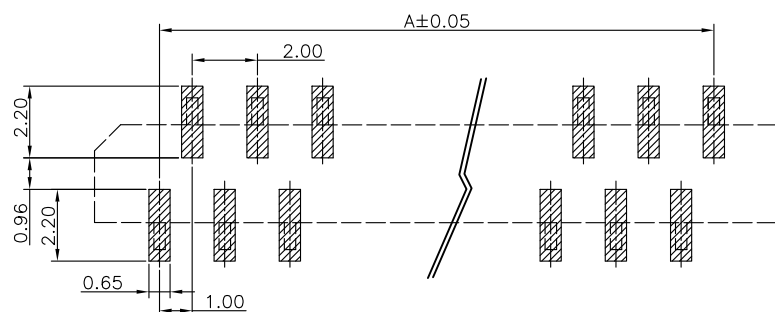
KIND	TOLERANCE		
	P	W	M
FPC	±0.02	±0.10 ±0.05	±0.05
FFC	±0.05	±0.03	±0.10



APPLICABLE FPC/FFC



3D VIEW.



MOUNTING LAYOUT (CONN.MOUNTING SIDE)

UNLESS OTHERWISE SPECIFIED TOLERANCES				ANGLE OF PROJECTION		Horus Int. Electronics. Co., LTD. Horustech Electronics. Co., LTD.	
X.	±0.50	X. °	± 1°			TITLE: FPC PITCH1.0mm NON-ZIF. SMT A TYPE	
X.X	±0.30	X.X °	± 0.5°				
X.XX	±0.20	X.XX °	± 0.5°	DOC TYPE Customer Drw		SIZE	
X.XXX	±0.10	X.XXX °	± 1°	DRAWN DATE May 2016-12-05		DWG NO.	
LINEAR DIMS				DESIGN DATE May 2016-12-05		REV.	
P/N:HRS-F52L-**7A1-110**-B*00				CHECKED DATE Rain 2016-12-05		A4	
MATERIAL SEE NOTES				APPROVED DATE Hongkui.liu 2016-12-05		A-S0289	
FINISHED SEE NOTES				SCALE 1:1		UNIT : mm	
				SHEET 1 OF 1			

1. 适用范围Scope:

此作业规范适用于: FPC PITCH 1.0 立式NO-ZIF SMT 系列

This product specifications is applied for: 1.0 Pitch FPC Vertical NON_ZIF SMT TYPE series

与FPC/FFC连接方式 Connected to the FPC/FFC : NON_ZIF

FPC/FFC适合厚度 FPC/FFC is suitable for thickness : 0.30±0.03mm

2. 关联规格 Related specifications:

EIA-364 :电子连接器及接插件测试程序 Electronic connectors and connector test procedure

UL STD-94 :关于塑材设备零配件及器材阻燃性测试规范 On the plastic material and equipment spare parts and equipment flame retardancy test

3. 构造 尺寸 材料 Configurations dimensions and materials :

参见结构图 Reference the drawing.

序号No.	部 位 Position	原材料供应商 material suppliers	材料名/T y p e 名 Materials	防火等级 FLAME CLASS	UL编号 FILE NO.
1	主体 (HOUSING)	宝理 POLYPLASTICS CO., LTD	LCP Liquid crystal polymer	UL94 V-0	E106764

4. 标准状态:

4. 1额定电压Rating voltage: AC/DC 50V

4. 2额定电流Rating current: 1.0A

4. 3温湿度范围Temperature and humidity range

4. 3. 1使用温度范围operation temperature: -40℃~+105℃;

4. 3. 2储存温度范围storage temperature: -10℃~+40℃;

4. 3. 3开封使用温度范围Temperature range for opening: +5℃~+35℃;

开封使用湿度The Humidity range for opening: 60%RH MAX

4. 3. 4保存湿度范围Keep humidity range:

相对湿度Relative humidity:45~80%RH.

5. 性能Performance

5. 1构造Structure

序号NO.	项 目Item	测试方法 Test conditions	规格要求 Specifications
1	外观Appearance	目视 Visual	无损坏No physical damage

5. 2电气性能 Electrical Performance

序号NO.	项 目Item	测试方法 Test conditions	规格要求 Specifications
1	接触阻抗 Contact Resistance	适配FFC标准线, 开放电压: 20mV 以下, 短路电流: 10mA 以下 Mate applicable FPC, measure by dry circuit, 20mV MAXIMUM, 10mA MAXIMUM	初始值initial:30mΩ Max.
2	绝缘阻抗 Insulation Resistance	相邻端子间 DC 500V, 1分钟。 DC 500V between adjacent terminals, 1 minutes	100MΩ Min.
3	耐电压 Dielectric withstanding voltage	相邻端子间AC 500V, 感度电流2mA,1分钟。 AC 500V between adjacent terminals, sensitivity of current 2mA, 1 minutes	无击穿, 无短路 No Breakdown.
4	温度上升 Temperature rise	端子在额定电压·电流下工作时测量端子上升的温度 The rising temperature measurement terminal at rated current under.	30℃ max

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 样 书 Product specification		Part name	1.0 Pitch FPC Vertical NON_ZIF SMT TYPE series		
Horus Int. Electronics. Co., LTD. HorusTech Electronics. Co., LTD.		Part No.	HRS-F52L-1A7A1-110**-B*00 HRS-F52M-1A7A1-110**-D*00 HRS-F52S-1A7A1-110**-B*00	1/4	
Document No.: IS.EQC.050	Date: 2020/03/23	Rev.: C	Written by: May	Checked by: Rain.Han	Approved by: Leo.Liu

5. 3机械性能Mechanical performance

序号NO.	项 目Item	测试方法 Test conditions	规格要求 Specifications
1	FFC/FPC拔出力 Withdrawal force	FFC/FPC (标配厚度0.30mm) 插入FPC连接器后, 以25~100mm/分匀速垂直拔出, 此动作重复三次后, 第四次才作测量资料的记录。 After FFC/FPC(standard thickness 0.30mm) is inserted into the FPC connector, it is pulled out vertically at constant speed of 25~100mm/ min. This action is repeated for three times before the measurement data is recorded for the fourth time.	40gf/pin min.
2	FFC/FPC插入力 Insertion force	FFC/FPC以25~100mm/分匀速垂直插入FPC连接器 FFC/FPC vertically inserted connector at constant speed 25~100mm per minute.	3000gf MAX
3	端子保持力 Terminal Retention Force	将端子25~100mm/分匀速垂直从胶芯槽内拔出 Apply axial pull out force on the terminal assembled in the housing at the speed rate of 25~100mm per minute.	200gf/terminal MIN.
5	插拔耐久性 Durability	以下动作进行30次巡回: FFC插入、FFC拔出 Following actions to 30 times tour: FFC insert, FFC pull out	接触阻抗Contact Resistance: 50mΩ MAX 无变形No Deformation 拔出力Withdrawal force: 40gf/pin MIN 插入力Insertion force : 3000gf MAX

5. 4 环境性能和其它 Environmental Performance and Others

1	耐振性 Vibration	配合合适的FFC/FPC, 按以下条件, X、Y、Z方向各2小时, 共6小时在测试过程中通过直流1mA, 振幅1.5mm, 频率10-55-10Hz/分。 Mate applicable FFC/FPC , according to the following conditions, X, Z, Y direction of each 2 hours, a total of 6 hours passing DC 1mA during the test. Amplitude : 1.5mm P-P Frequency : 10-55-10 Hz Shall be traversed in 1 minute.	接触阻抗Contact Resistance : 初始值的2倍以下。 Is less than 2 times the original specification value
2	随机振动 Radom Vibration	配合合适的FFC/FPC, 按以下条件, X,Y,Z方向各11ms, 各3回, 共18回, 在测试过程中通过直流1mA, 加速度490m/s ² , Mate applicable FFC/FPC ,according to the following conditions, X, Z, Y direction of the 11ms, the 3 times, a total of 18 times during the test process by DC 1mA. Test pulse : Half Sine Peak value : 490m/s ² {50G} Duration : 11 milliseconds	不连续导通1μs以内; No electric outage of 1μs or greater 外观无异常 No abnormal appearance
3	耐寒性 Cold Resistance	配合合适的FFC/FPC, -25±3℃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 -25±3℃, the time of 96H was removed, and the test was conducted at room temperature for 1~2 hours.	1. 接触阻抗: 50 mΩ Max. 2. 绝缘阻抗: 100 MΩ Min. 3. 耐电压: 无击穿, 短路 4. 外观: 无异常
4	耐热性 Heat Resistance	配合合适的FFC/FPC , 85 ± 2℃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 85±2℃, 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 : 100 MΩ Min.
5	耐湿性 Humidity	配合合适的FFC/FPC, 40±3℃、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℃, relative humidity 90~95% in the time of 96H after removal, 1~2 hours after room temperature for testing.	3.Dielectric withstanding voltage: No Breakdown. 4 . 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

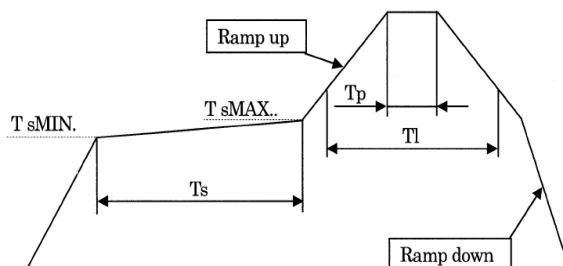
制 品 仕 样 书 Product specification		Part name	1.0 Pitch FPC Vertical NON_ZIF SMT TYPE series		
Horus Int. Electronics. Co., LTD. HorusTech Electronics. Co., LTD.		Part No.	HRS-F52L-1A7A1-110**-B*00 HRS-F52M-1A7A1-110**-D*00 HRS-F52S-1A7A1-110**-B*00	2/4	
Document No.: IS.EQC.050	Date: 2020/03/23	Rev.: C	Written by: May	Checked by: Rain.Han	Approved by: Leo.Liu

5. 4 环境性能和其它 Environmental Performance and Others

序号NO.	项 目Item	测试方法 Test conditions	规格要求 Specifications
6	盐雾试验 Salt Spray	配合合适的FFC/FPC，温度 $35\pm 2^{\circ}\text{C}$ ；盐水比重 $5\pm 1\%$ 喷雾试验48H，试验后常温水洗干燥后进行测试。 Temperature suitable FPC, 35 plus or minus 2°C ; 5 plus or minus 1% of the total salt spray test 48 h, normal temperature after washing dry test after test	1. 接触阻抗: 50mΩ Max. 2. 绝缘阻抗: 100 MΩ Min. 3. 耐电压: 无击穿, 短路 4. 外观: 无异常
2	冷热冲击 Thermal Shock	配合合适的FFC/FPC， $-55\pm 3^{\circ}\text{C}$ ； $85\pm 2^{\circ}\text{C}$ 的温度下各放置30分钟，共进行5次循环 Mate applicable FPC, $-55\pm 3^{\circ}\text{C}$, $85\pm 2^{\circ}\text{C}$, 30 minutes, 5 cycles were performed. 1 : -55°C 30 minutes 2 : $+85^{\circ}\text{C}$ 30 minutes	1. Contact Resistance: 30mΩ Max. 2. Insulation Resistance : 100 MΩ Min. 3. Dielectric withstanding voltage: No Breakdown.
3	沾锡性 Solderability	端子焊脚和固定片前端0.3mm，沾锡温度 $245\pm 5^{\circ}\text{C}$ (Sn: Lead Free) ; 时间 $3\pm 0.5\text{S}$ Terminal welding feet and fitting nail front 0.3mm, soldering temperature $245\pm 5^{\circ}\text{C}$ (Sn: Lead Free); time $3\pm 0.5\text{S}$	吃锡饱满，在95%以上 95% of immersed area must show no voids, pin holes
4	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 $350\pm 10^{\circ}\text{C}$ (Sn: Lead Free) ; 时间 $10+1/-0\text{S}$ Terminal welding feet and fitting nail front 0.3mm, soldering Iron temperature $350\pm 10^{\circ}\text{C}$ (Sn: Lead Free) , time : $10+1/-0\text{S}$	
5	耐热性 Reflow	预备加热时间 Pre-heating time : $170^{\circ}\text{C} \sim 190^{\circ}\text{C}$ 60~180s。 焊锡温度时间 Soldering Temperature Time : 260°C 10sMAX。	共面度0.10mm Max. 外观无异常， Coplanar degree 0.10mm Max. No abnormal appearance.
6	Whisker (Tin镀锡品)	过Reflow后插入FFC/FPC，放置500H，观察WHISKER长度 Insert FPC after reflow, place 500H, observe the length of Whisker	100um max

Reflow Condition:

Profile Feature	Lead-free Eutectic Assembly
温度上升 Ramp up Rate(TSmax to Tp)	: $1 \sim 4^{\circ}\text{C}/\text{S}$
. 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 样 书 Product specification		Part name	1.0 Pitch FPC Vertical NON_ZIF SMT TYPE series		
Horus Int. Electronics. Co., LTD. HorusTech Electronics. Co., LTD.		Part No.	HRS-F52L-1A7A1-110**-B*00 HRS-F52M-1A7A1-110**-D*00 HRS-F52S-1A7A1-110**-B*00	3/4	
Document No.: IS.EQC.050	Date: 2020/03/23	Rev.: C	Written by: May	Checked by: Rain.Han	Approved by: Leo.Liu

7. 包装Packaging

参考包装图 Refer to the packing figure

8. 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	2018/4/21	New	贺恩海	叶正闲
B	2016/4/14	更新为中英文对照, 料号升级 Updated to contrast in both Chinese and English , Part No. upgrade	May. Wang	Rain. Han
C	2020/3/23	新增HRS-F52S Increase the HRS- F52S	May. Wang	Rain. Han

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 样 书 Product specification		Part name	1.0 Pitch FPC Vertical NON_ZIF SMT TYPE series		
Horus Int. Electronics. Co., LTD. HorusTech Electronics. Co., LTD.		Part No.	HRS-F52L-1A7A1-110**-B*00 HRS-F52M-1A7A1-110***-D*00 HRS-F52S-1A7A1-110**-B*00	4/4	
Document No.: IS.EQC.050	Date: 2020/03/23	Rev.: C	Written by: May	Checked by: Rain.Han	Approved by: Leo.Liu