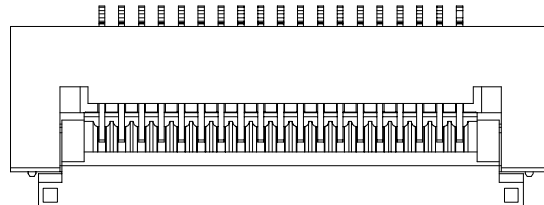


FPC Connector
0.5mm Pitch 1.5High

Product Specification

Issued Date
99.04.16



FPC Connector 0.5 Pitch R/A ZIF SMT TYPE

Update List:

Item	Update Description	Rev.	Issued Date	Revisor
1	New Edit	A	99.04.16	

1. SCOPE

1.1. Contents

This specification covers the performance, tests and quality requirements for the (With Cover), R/A,SMT, 0.5 mm Pitch, 1.50 mm H, Connector.

1.2. Qualification

When tests are performed on the subject product line, the procedures specified in FPC 0.5mm Pitch series specifications shall be used. All inspections shall be performed using the applicable inspection plan and product drawing.

2. ORDERING INFORMATION

PART NO.: FPC 05 15 01 XX L X
1 2 3 4 5 6 7

1	Series name	FPC Connector
2	Pitch	0.5 mm
3	High	1.5mm
4	Mode	01:Clamshell FFC T=0.3mm / 02:Drawer FFC T=0.3mm 03:Clamshell FFC T=0.2mm / 04:Drawer FFC T=0.2mm
5	Number of terminals	04-68PIN
6	Assembly style	L:Low Contact SMT Type / U:Upper Contact SMT Type D:Double-Face Contact SMT Type
7	Plating	G:Gold flash over Nickel / T:Tin OVER Nickel

3. CONNECTOR DIMENSIONS

See attached drawings.

4. MATERIAL

Housing :	Hight-Temp plastic Color : White
	Flammability Rating (UL94V-0)
Actuator	Hight-Temp plastic Color : Black.
	Flammability Rating (UL94V-0)
Contact :	Copper alloy
Peg :	Copper alloy
Contact Plating	See Ordering Information
Peg Plating:	Tin over Nickel

5. ACCOMMODATED P.C.B. LAYOUT

See attached drawings.

6. RATING.

ITEM	STANDARD
Operating Voltage (Max.)	25 V AC/DC
Current Rating (Max.)	0.3 A AC/DC
Operating Temperature	-25°C ~ +85°C (Including terminal temperature rise)

7. PERFORMANCE

TEST ITEM		REQUIREMENT	PROCEDURE
1	Examination of Product	Meets requirements of product drawing. No physical damage.	Visual inspection.
ELECTRICAL REQUIREMENT			
2	Contact Resistance	[30] m Ohm Max(Initial)	Subject mated contacts assembled in housing to 20mV Max open circuit at 10mA Max. Refer to Fig.3
3	Dielectric withstanding Voltage	No creeping discharge or flashover shall occur. Current leakage: 0.5 mA MAX	[500]VAC for 1minute Test between adjacent circuits of unmated connector.
4	Insulation Resistance	[500] M Ohm Min.(Initial)	Impressed voltage 500 VDC. Test between adjacent circuits of unmated connector.
5	Temperature Rising	30°C Max. Under loaded rating current	Contact series-wired, apply test current of loaded rating current to the circuit, and measure the temperature rising by probing on soldered areas of contacts, after the temperature becomes stabilized deduct ambient temperature from the measured value.
MECHANICAL REQUIREMENT			
6	Contact / Peg Retention Force	0.100 kgf Min.	Apply axial pull out force at the rate of [25.4±3] mm/min on the terminal assembled in the housing.
7	FPC/FFC Retention Force	0.030 kgf/Pin Min.(PIN≥17) 0.500 kgf/ Min. (PIN<17)	Operation Speed : [25.4±3] mm/min Measure the force required to unmate connector.
8	Durability	Contact Resistance: [50] m Ohm Max(Final)	Operation Speed : [10] cycle-max./min Durability Cycles : 50 Cycles
9	Vibration	No electrical discontinuity greater than 0.1 or 1 μ sec shall occur. See Note.	Subject mated connectors to 10-55-10 Hz traversed in 1minutes at 1.52mm amplitude 2 Hours each of 3 mutually perpendicular planes. 100mA Max. Applied.
10	Mechanical Shock	No electrical discontinuity greater than 0.1 or 1 μ sec shall occur. See Note.	Accelerate Velocity : 490m/s ² (50G) Waveform : Half-sine shock plus Duration : 11msec No. of Drops : 3 drops each to normal and reversed directions of X, Y and Z axes, totally 18 drops, passing DC 100mA max. Current during the test.

TEST ITEM		REQUIREMENT	PROCEDURE
MECHANICAL REQUIREMENT			
11	Solder ability	The inspected area of each lead must have 95% solder coverage minimum.	Steam Aging Preconditioning : Intended for no-tin lead and no-tin lead -alloy finished for 93+3/-5℃ 、8hrs. Solder pot temperature: 245 ± 5℃ ,3~5sec
ENVIRONMENTAL REQUIREMENTS			
12	Resistance to Reflow Soldering Heat	No physical damage shall occur. (Lead-Free)	Pre Heat : 150~180℃ , 90±30sec. Heat : 230℃ Min., 30±10sec. Peak Temp. : 260+0/-5℃, 10sec. or less Duration : 3 cycles Refer to Fig.4
13	Thermal Shock	Contact Resistance: [50] m Ohm Max(Final)	Mated Connector -55+/-3℃ (30 min.), +85+/-2℃ (30 min) Perform this a cycle, repeat 5 cycles
14	Humidity-Temperature Cycle	Contact Resistance: [50] m Ohm Max(Final)	Mated Connector 25~65℃, 90~95% RH, 10 Cycles
15	Temperature Life (Heat Aging)	Contact Resistance: [50] m Ohm Max(Final)	Mated Connector 85℃, 250 hours,
16	Salt Spray	No detrimental corrosion allowed in contact area and base metal exposed. Contact Resistance: [40] m Ohm Max(Final)	Subject mated connectors to 35+/-2℃ and 5+/-1% salt condition for 48hours. After test, rinse the sample with water and recondition the room temperature for 1 hour. EIA-364-26B, Condition B

Figure 1 (End)

NOTE : Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in Figures 2

7.1. PRODUCT QUALIFICATION AND REQUALIFICATION TEST

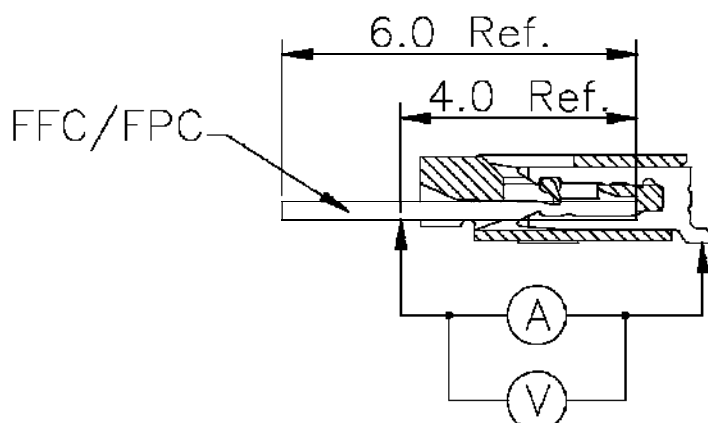
Test or Examination	Test Group									
	A	B	C	D	E	F	G	H	I	J
	Test Sequence (a)									
Examination of Product	1, 7	1, 9	1, 6	1, 5	1, 5	1, 5	1, 5	1, 3	1, 3	1, 3
Contact Resistance		2, 8	2, 5	2, 4	2, 4	2, 4	2, 4			
Dielectric withstanding Voltage	3, 6									
Insulation Resistance	2, 5									
Temperature Rising								2		
Contact/ Peg Retention Force		3, 7								
FPC/FFC Retention Force		4, 6								
Durability		5								
Vibration			3							
Mechanical Shock			4							
Solder ability										2
Resistance to Soldering Heat									2	
Thermal Shock				3						
Humidity Temperature Cycling	4				3					
Temperature Life						3				
Salt Spray							3			

Figure 2

NOTE (a) Numbers indicate sequence in which tests are performed.

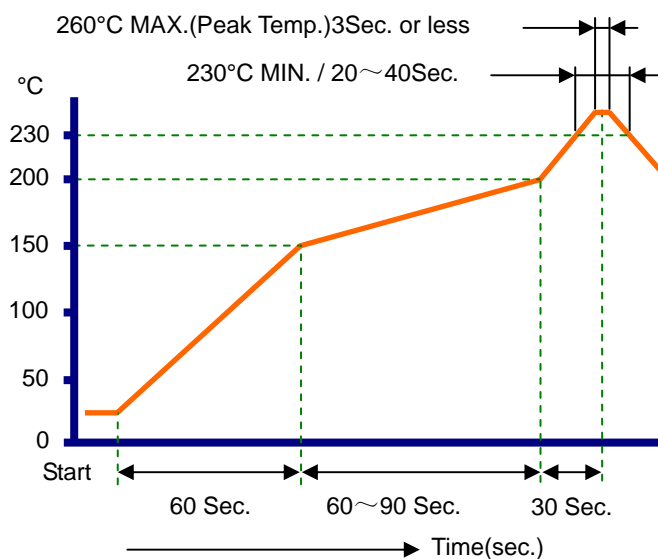
(b) Discontinuities shall not take place in this test group, during tests. Figure 3.

Contact Resistance



FPC Connector 0.5mm Pitch 1.5High	Product Specification	Issued Date
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8. INFRARED REFLOW CONDITION



NOTE: Please check the re-flow soldering condition by your own devices beforehand .
Because the condition changes by the soldering devices, p.c. boards, and so on.

9. TAPE AND REEL PACKAGE SPECIFICATION

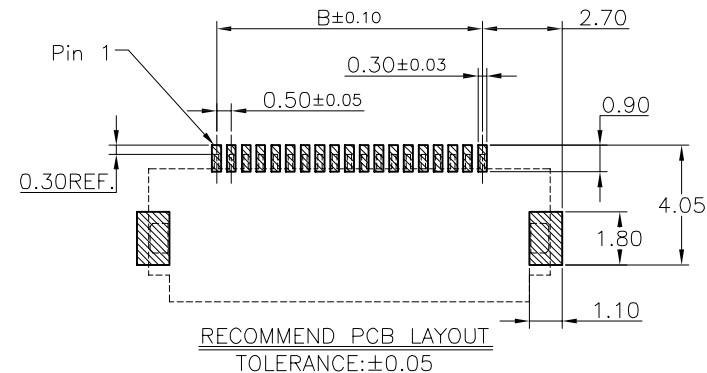
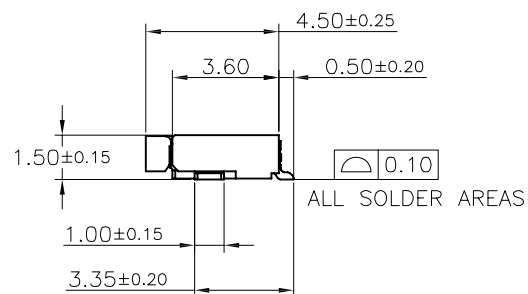
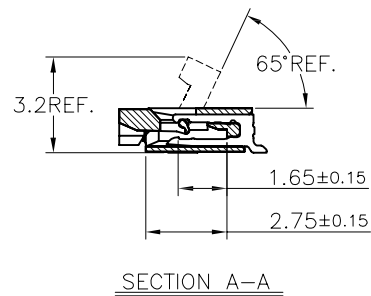
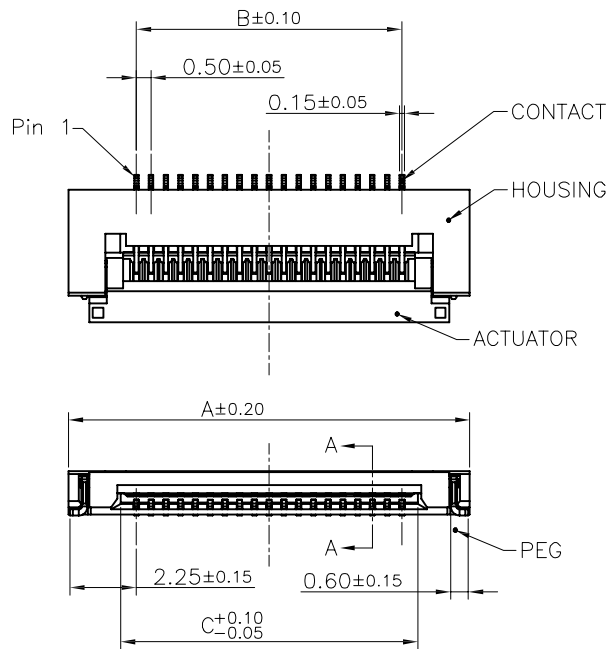
9-1.Tape and Reel Dimensions : See attached drawings.

9-2.Specification

No. of Contacts	Width	? Pcs / Reel	? Reels / Carton
04~08	16	4 K / 1	14 / 1
09~24	24	4 K / 1	10 / 1
25~36	32	4 K / 1	8 / 1
37~40	44	4 K / 1	6 / 1

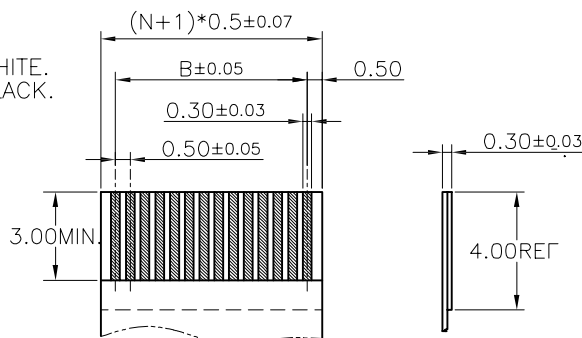
Export Carton Layer: 3 Layers

Carton Size: 350x350x300mm



NOTE:

- 1.MATERIAL:
1.1 HOUSING: HIGHT-TEMP PLASTIC(UL94V-0) COLOR:WHITE.
1.2 ACTUATOR:HIGHT-TEMP PLASTIC(UL94V-0) COLOR:BLACK.
1.3 CONTACTS: COPPER ALLOY
1.4 PEG: COPPER ALLOY.
2.PLATING:
2.1 CONTACTS: SEE ORDERING INFORMATION
2.2 STOPPER: TIN OVERALL NICKEL
3.RATING:
3.1 OPERATING VOLTGE: 25V(AC/DC)
3.2 CURRENT RATING: 0.3A(AC/DC)
3.3 OPERATING TEMPERATURE: -25°C ~ +85°C



RoHS
compliant

APPLICABLE FFC
TOLERANCE: ±0.05

PIN NO.	DIM. A	DIM. B	DIM. C
04	6.10	1.50	2.57
05	6.60	2.00	3.07
06	7.10	2.50	3.57
07	7.60	3.00	4.07
08	8.10	3.50	4.57
09	8.60	4.00	5.07
10	9.10	4.50	5.57
11	9.60	5.00	6.07
12	10.10	5.50	6.57
13	10.60	6.00	7.07
14	11.10	6.50	7.57
15	11.60	7.00	8.07
16	12.10	7.50	8.57
17	12.60	8.00	9.07
18	13.10	8.50	9.57
19	13.60	9.00	10.07
20	14.10	9.50	10.57

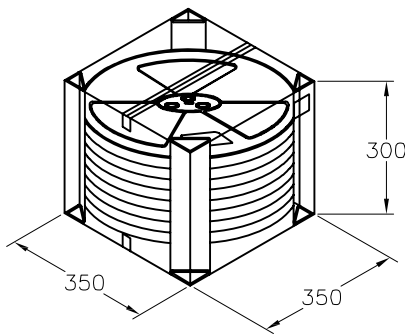
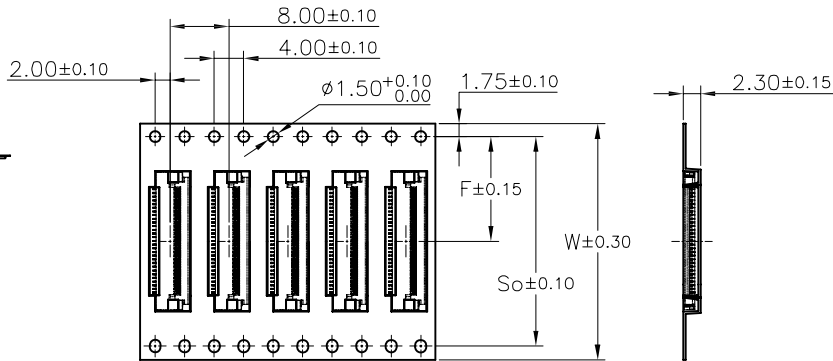
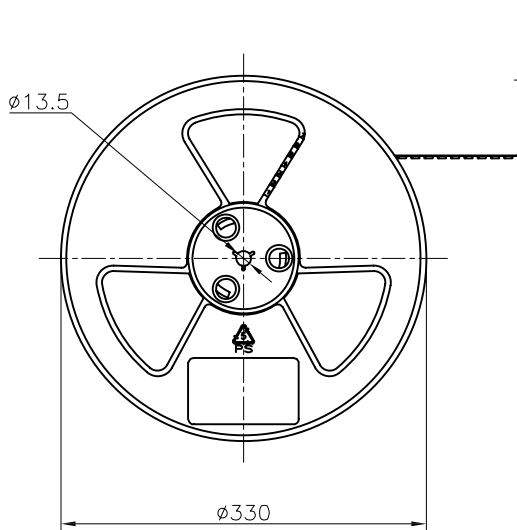
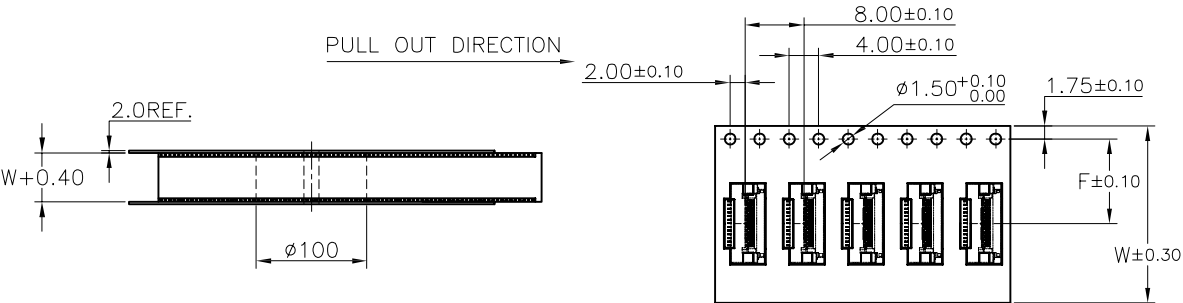
21	14.60	10.00	11.07
22	15.10	10.50	11.57
23	15.60	11.00	12.07
24	16.10	11.50	12.57
25	16.60	12.00	13.07
26	17.10	12.50	13.57
27	17.60	13.00	14.07
28	18.10	13.50	14.57
29	18.60	14.00	15.07
30	19.10	14.50	15.57
31	19.60	15.00	16.07
32	20.10	15.50	16.57
33	20.60	16.00	17.07
34	21.10	16.50	17.57
35	21.60	17.00	18.07
36	22.10	17.50	18.57
37	22.60	18.00	19.07
38	23.10	18.50	19.57
39	23.60	19.00	20.07
40	24.10	19.50	20.57

本产品需符合 ☒ RoHS ☐ SONY00259 ☐ 其他
※禁止使用本公司所禁用有毒物质

AO	NEW DWG	SC.Zhang	
REV	ECN.NO:	BY	DATE

-TOLERANCES- UNLESS OTHERWISE SPECIFIED 公差参考表		深圳市联泽瑞科技有限公司 SHENZHEN LIANZERUI TECHNOLOGY CO.,LTD.			
X.X ±0.30	X.X* ±5°	APPD: 核准: Nick CHECK: 校對: SC.Zhang DRAW: 繪圖: SC.Zhang	TITLE: 產品名稱: 0.5mm Pitch FPC CONNECTOR		
X.XX ±0.20	X.XX* ±2°		DWG NO: 產品料號: FPC051501XXLX		
X.XXX ±0.10	X.XXX* ±1°		DATE	SCALE	UNIT
				1:1	mm
					1/2

EMBOSED TAPE PACKING 0.5mm Pitch PC CONNECTOR , ZIF, SMT Type



RoHS
compliant

- Note:
- 1.10 Sprocket hole pitch cumulative tolerance ± 0.20 .
 - 2.Carrier camber is within 1mm in 100mm.
 - 3.Material: black conductive polystyrene alloy.
 - 4.Material Thickness: 0.3 ± 0.05 mm.
 - 5.All dimensions meet EIA-481-B requirements.
 - 6.4000pcs Pef Reel.
 - 7.For tape width(dim W)16 and 24mm pilot holes are provided on one sides.
For tape width(dim W)32, 44 and 56mm pilot holes are provided on both sides.

PIN NO.	DIM W	DIM F	DIM So
04~08	16.0	7.50 ± 0.10	--
09~24	24.0	11.50 ± 0.10	--
25~36	32.0	14.20 ± 0.10	28.4
37~40	44.0	20.20 ± 0.15	40.4

PIN No.	04~08	09~24	25~36	37~40
REEL WIDTH	16.4	24.4	32.4	44.4
PCS/REEL	4000	4000	4000	4000
REEL/BOX	14	10	8	6
BOX/PCS	56K	40K	32K	24K
CTN. SIZE	350*350*300			

本产品需符合 ☒ RoHS ☐ SONY00259 ☐ 其他
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X.X ± 0.30	X.X* $\pm 5^{\circ}$	APPD: 核准: Nick	TITLE: 產品名稱: 0.5mm Pitch FPC CONNECTOR		
X.XX ± 0.20	X.XX* $\pm 2^{\circ}$	CHECK: 校對: SC.Zhang	DWG NO: 產品料號: FPC051501XXLX		
X.XXX ± 0.10	X.XXX* $\pm 1^{\circ}$	DRAW: 繪圖: SC.Zhang	DATE	SCALE	UNIT
				1:1	mm
					2/2