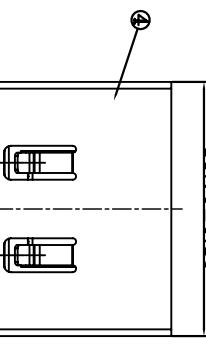
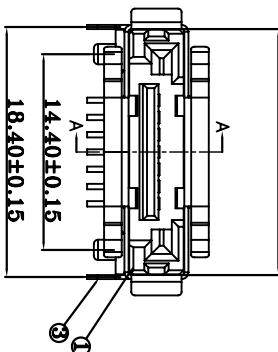


REV	6	DESCRIPTION	APPRO.	CHANGE	DATE
▲		原始尺寸			

 Rohs Compliant

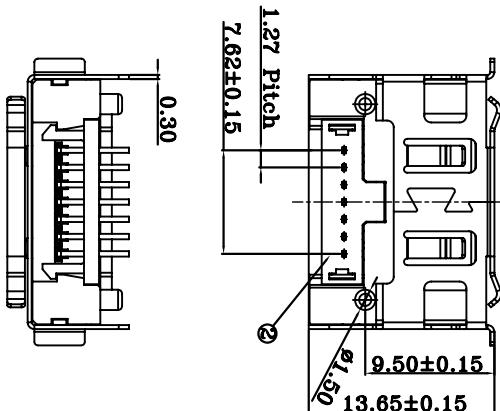


18.70±0.15



18.40±0.15

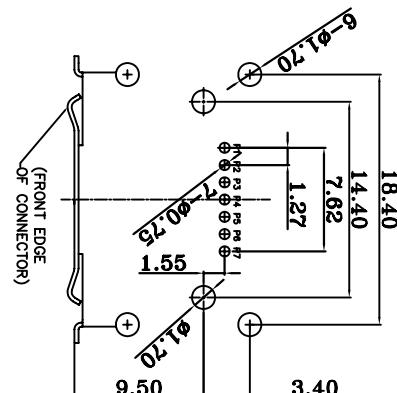
14.40±0.15



1.27 Pitch

7.62±0.15

0.30



18.40

14.40

7.62

1.27

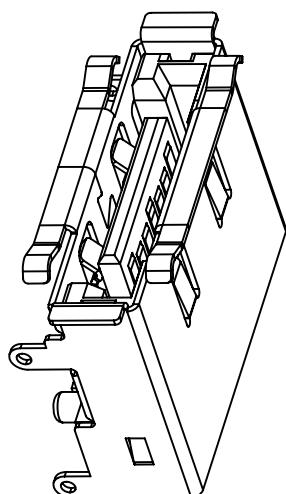
1.55

9.50

3.40

(FRONT EDGE  
OF CONNECTOR)

#### RECOMMENDED PC BOARD LAYOUT



#### SPECIFICATION:

##### MATERIAL:

HOUSING:PA6T 30% GF UL 94V-0

##### COLOR:BLACK

CONTACT:Bronze C5191-H,T=0.25mm

SHELL:BRASS C2680R-H,T=0.30mm

##### FINISH

CONTACT:3μ"GOLD/TIN PLATING ON CONTACT AREA

100μ"MIN.TIN-LEAD PLATING ON SOLDERTAILS

50μ"MIN.NICKEL UNDERPLATING OVERALL

PEG:100μ"MIN.TIN-LEAD PLATING ON SOLDERTAILS

50μ"MIN.NICKEL UNDERPLATING OVERALL

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO \*\*\* INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

KLS Electronic co.,LTD

E TITLE: E\_SATA 7P - E (DIP Type)

F DRAW

PART NO.

DESIGN DWG NO.

CHECK (OLD)PART NO.

APPRO.

SCALE 1:1 UNIT:mm A4

ANGULAR A4

1 2 3 4 5 6 7 8

1      2      3      4      56      7      8      9

## SPECIFICATIONS

### 1.MATERIAL:

Housig: LCP UL 94V-0  
Color: Black

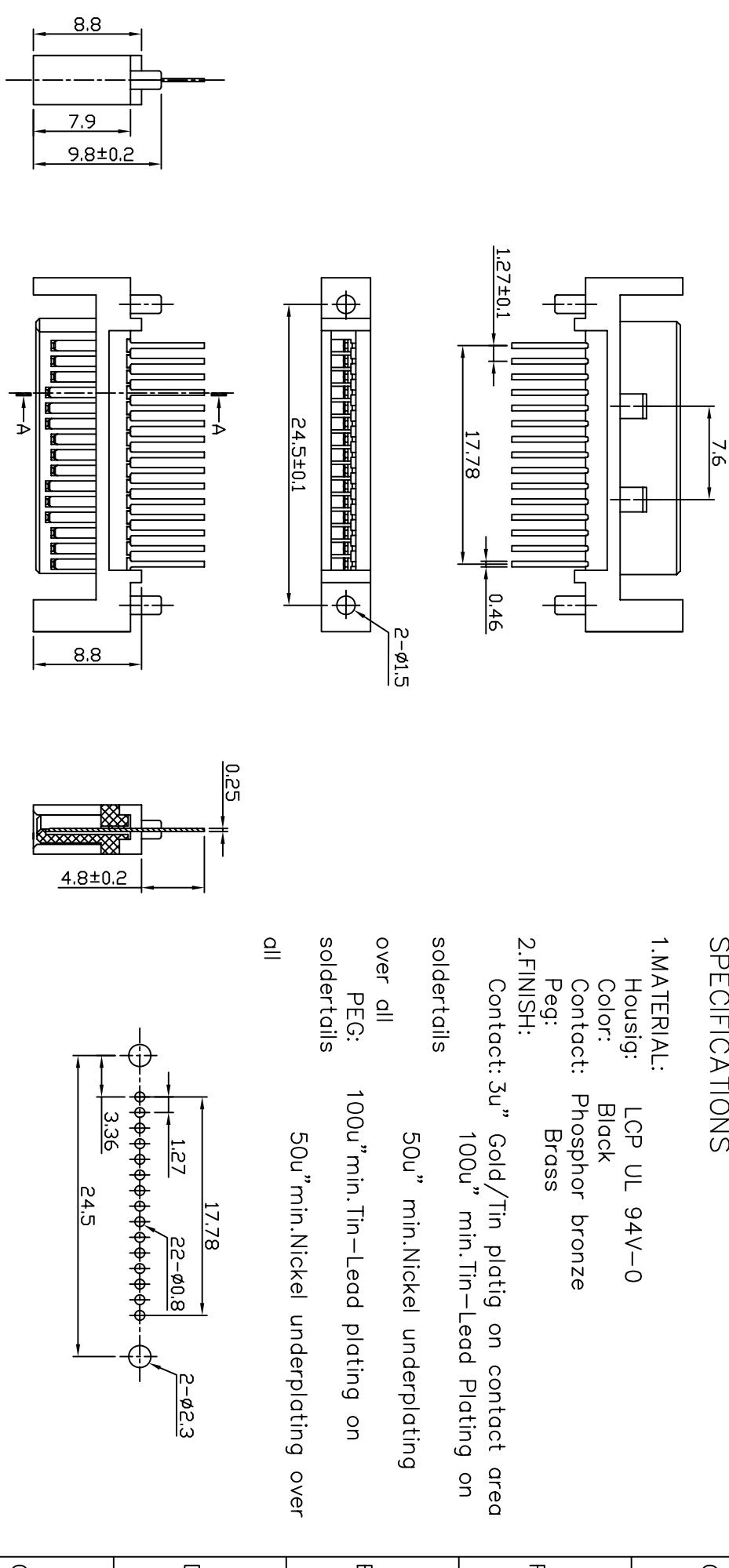
Contact: Phosphor bronze  
Peg: Brass

### 2.FINSH:

Contact: 3u" Gold/Tin plating on contact area  
100u" min.Tin-Lead Plating on  
soldertails

over all 50u" min.Nickel underplating  
PEG: 100u" min.Tin-Lead plating on  
soldertails

all 50u"min.Nickel underplating over  
soldertails



A	B	C	D	E	F	G
SATA 15P 180度 公座	28.8±0.2	4.0	8.8	17.78	0.46	7.6
			9.8±0.2	1.27±0.1		
			7.9	24.5±0.1		
1	2	3	4	5	6	7
				8		9



1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

### 2. FINISH:

Contact: 3u" Gold/Tin plating on contact area

100u" min. Tin-Lead Plating

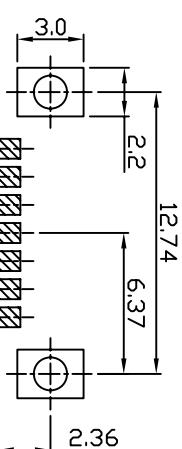
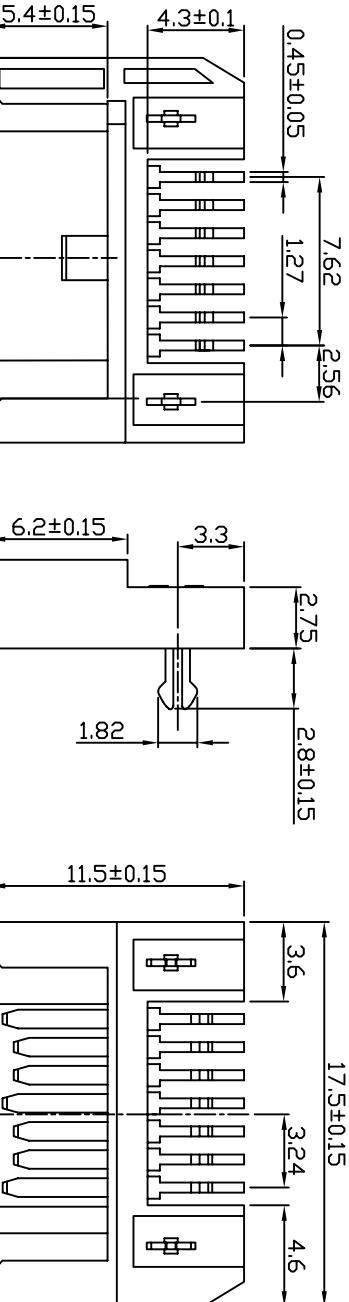
50u" min.Nickel underplating

over all PEG: 100u"min.Tin-Lead plating on

soldertails 50u"min.Nickel underplating

### over all

ALL SOLDERTAILS



## PCB LAYOUT

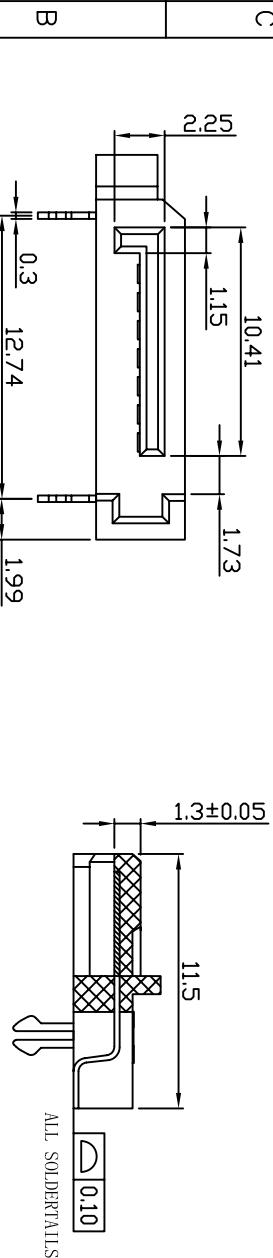
SPECIFIED TOLERANCE		KLS Electronic CO.,LTD
ANGLE	±0.5°	
SCALE	.00	UNIT: mm

DRAWN LI BEI LIN 16/08/08 DRAWN NAME

CHECKED APPROVED / / PRODUCT NO.

SIZE A4 REV A FILE NAME:

A



B

C

D

E

F

G

A

SATA 7P 板端正向90度 SMT型

1      2      3      4      5

6

7

8

9

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2. FINISH:

Contact: 3u" Gold/Tin plating on contact area  
100u" min.Tin-Lead Plating

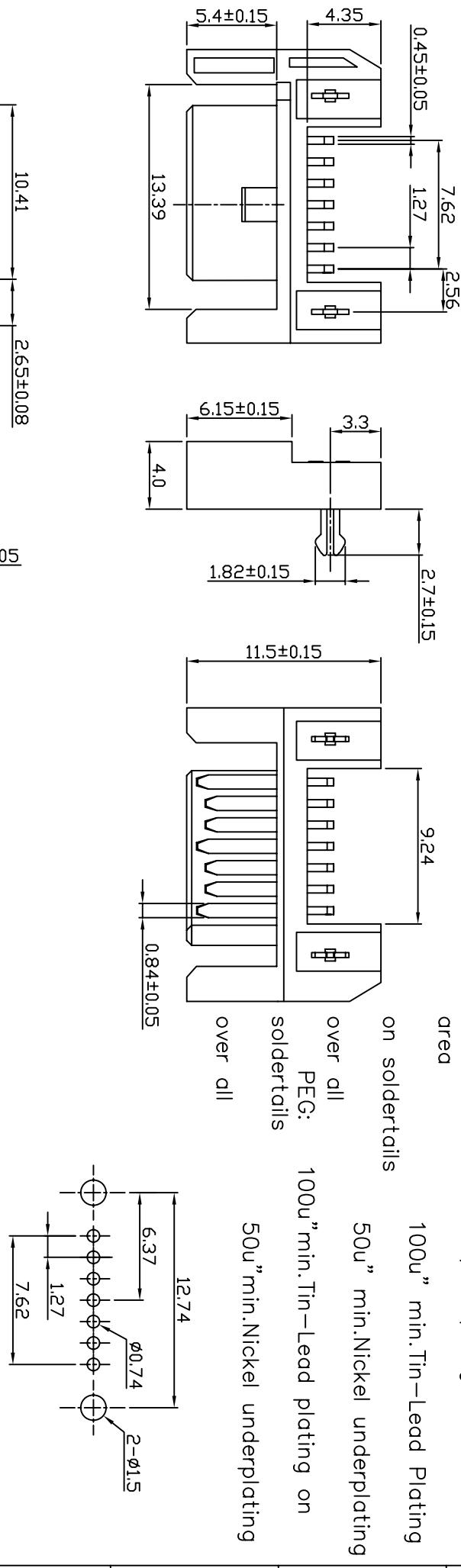
50u" min.Nickel underplating  
over all  
PEG: 100u"min.Tin-Lead plating on  
soldertails

50u"min.Nickel underplating  
over all

100u" min.Tin-Lead Plating  
on soldertails

50u" min.Nickel underplating  
over all

## PCB LAYOUT



SPECIFIED TOLERANCE		KLS Electronic CO.,LTD
ANGLE	±0.3°	
0.00	±0.02	
0.00	±0.02	
SCALE	UNIT: mm	
DRAWN	L1 BEI LIN	DRAWN NAME
CHECKED		
APPROVED	/ /	PRODUCT NO.
	SIZE A4 REV A	FILE NAME:

SATA 7P 板端正向90度 DIP型

A

1      2      3      4      5      6      7      8      9

## NOTES:

### 1: MATERIAL:

- 1.1 Housing: Thermoplastic,UL 94-V0,Color: See table.
- 1.2 Contavt: Copper alloy,50 $\mu$ "min. Nickel plating Overall; 100 $\mu$ " min. Tin on solder tail; Gold plating(see table) on contact area.
- 1.3 Hook: Copper alloy,50 $\mu$ " min. Nickel and 100 $\mu$ " min Tin plating overall.

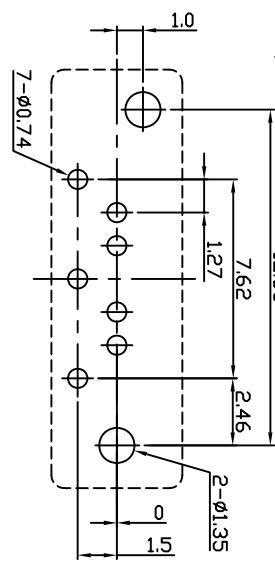
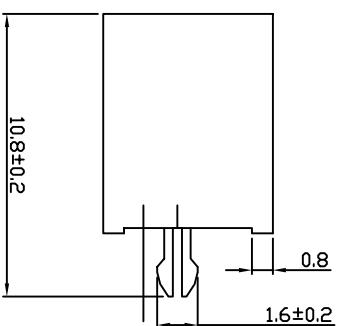
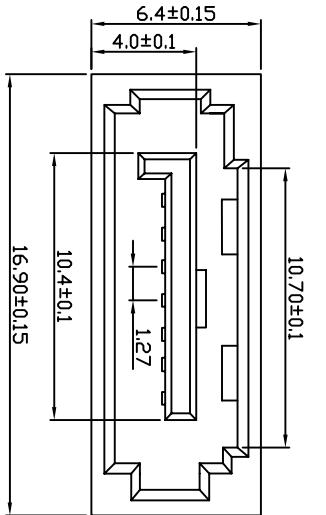
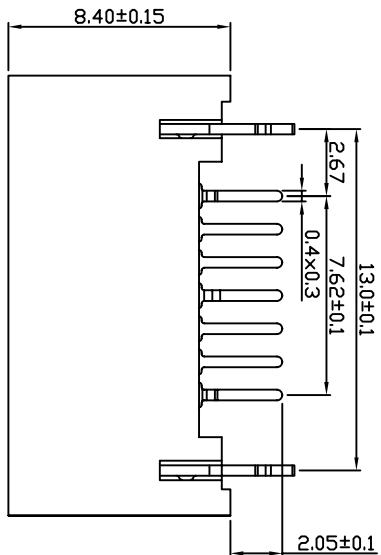
### 2: ELECTRICAL:

- 2.1 Low level contact resistance: Initially 25 milliohms max.
- 2.2 Insulation resistance: 1000 megaohms at sea level
- 2.3 Dielectric withstand voltage: 500VRMS min.

3: According to the environmental requirement, Warranty

The controlled hazardous substance should be meet ROHS's specification 12.83

D      E      F      G



Recommend PC Board Layout  
(Top layer ,Thickness:1.60mm)

SPECIFIED TOLERANCE		KLS Electronic Co.,LTD
ANG	±5°	
0	±0.3	
0.00	±0.05	
SCALE	UNIT: mm	
DRAWN Li Bei Lin	08/10/07	DRAWN NAME: SATA 7P
CHECKED		
APPROVED	/ /	PRODUCT NO.
	SIZE A4 REV A	FILE NAME:

A	SATA 7P 全包不开窗 B型	1	2	3	4	5	6	7	8	9
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1      2      3      4      5      6      7      8      9

## NOTES:

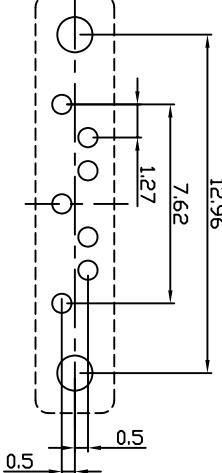
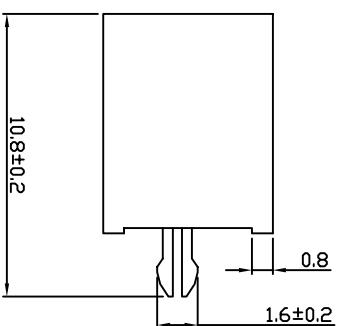
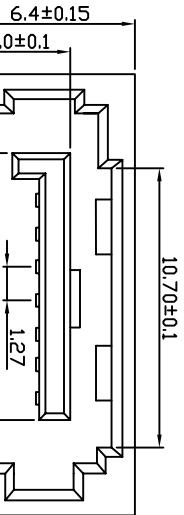
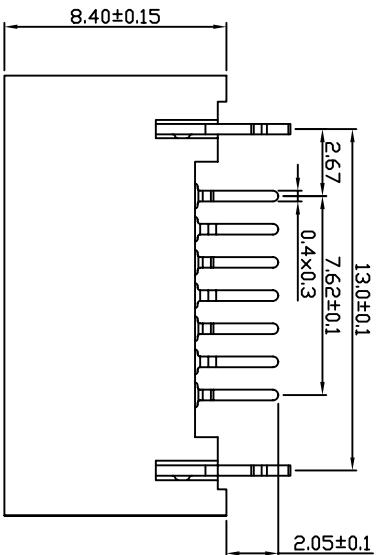
### 1: MATERIAL:

- 1.1 Housing: Thermoplastic,UL 94-V0,Color: See table.
- 1.2 Contavt: Copper alloy,50 $\mu$ "min. Nickel plating Overall; 100 $\mu$ " min. Tin on solder tail; Gold plating(see table) on contact area.
- 1.3 Hook: Copper alloy,50 $\mu$ " min. Nickel and 100 $\mu$ " min Tin plating overall.

### 2: ELECTRICAL:

- 2.1 Low level contact resistance: Initially 25 milliohms max.
- 2.2 Insulation resistance: 1000 megaohms at sea level
- 2.3 Dielectric withstand voltage: 500VRMS min.

3: According to the environmental requirement, Warranty The controlled hazardous substance should be meet ROHS'S specification



Recommend PC Board Layout  
(Top layer ,Thickness:1.60mm)

SPECIFIED TOLERANCE		DRAWN BY: Li Bei Lin	CHECKED BY: A	APPROVED BY: A
ANG	UNIT: mm			
0 <sup>0.0</sup> <sub>0.00</sub>	±0.3 <sub>±0.05</sub>			

KLS Electronic CO.,LTD

B

G

A	SATA 7P 全包不开窗 A型	1	2	3	4	5	6	7	8	9
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1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1. MATERIAL:

Housig: PBT UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2. FINISH:

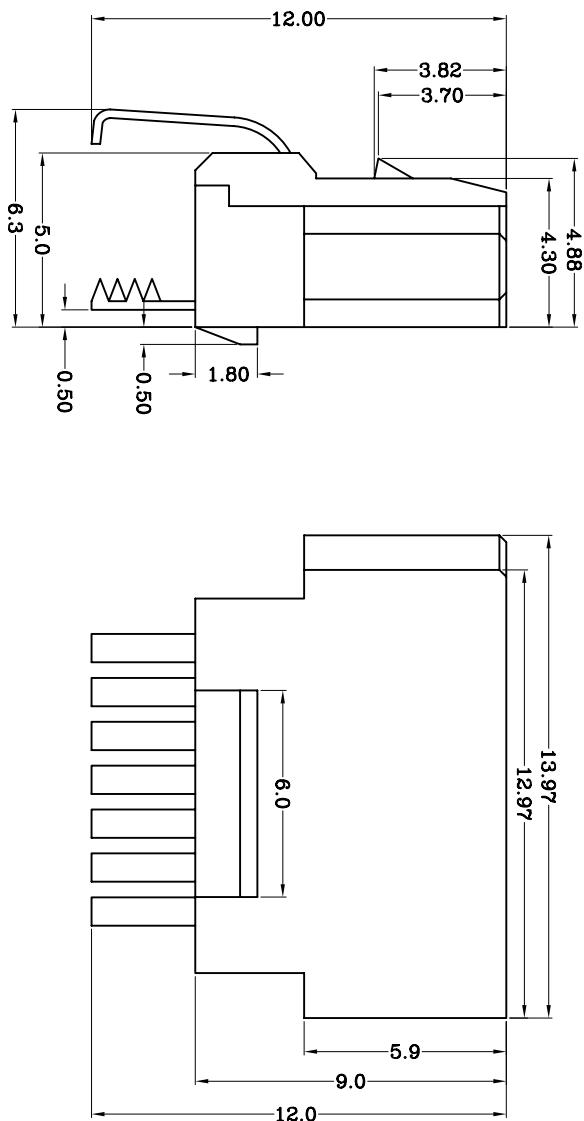
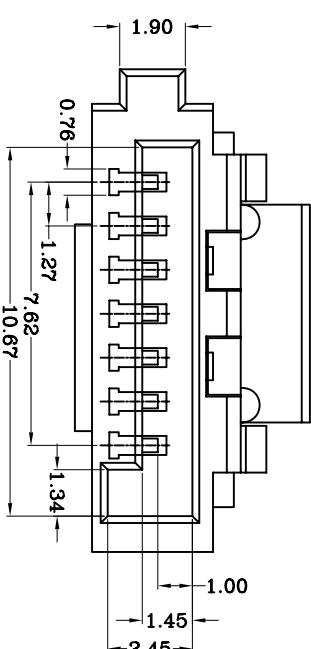
Contact: 3u" Gold/Tin plating on contact area

100u" min.Tin-Lead Plating

50u" min.Nickel underplating

over all PEG: 100u" min.Tin-Lead plating on soldertails

50u" min.Nickel underplating over all



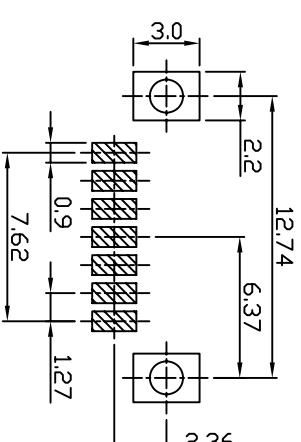
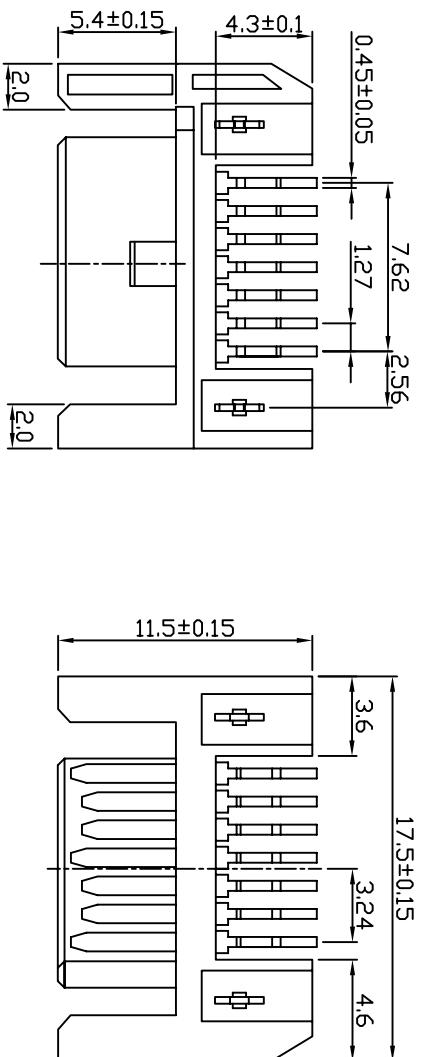
SPECIFIED TOLERANCE UNLESS OTHERWISE ANG		KLS Electronic CO.,LTD
0	±0.3	
0.00	±0.2	
0.00	±0.05	
SCALE	UNIT: mm	
DRAWN	Li Bei Lin	DRAWN NAME
CHECKED		SATA 7P A TYPE
APPROVED	/ /	PRODUCT NO.
	SIZE A4 REV A	FILE NAME:

A	SATA 7P 焊线式	1	2	3	4	5	6	7	8	9
---	-------------	---	---	---	---	---	---	---	---	---

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

Current Rating: 3Amps  
 Insulator Resistance: 5000m $\Omega$  Min  
 Dielectric Withstanding: AC 500V  
 Operating Temperature: -40°t0+105°  
 Contact Material: Copper alloy  
 Insulator Material: Polyester,UL 94V-0  
 LCP  
 Finish : Tin,Gold or Duplex plated  
 Standard : Gold flash all over  
 Max.Processing Temp: 230C°for  
 30-60seconds(260C°for 10 secinds)



## PCB LAYOUT

SPECIFIED TOLERANCE		UNLESS OTHERWISE
SCALE	ANGLE	UNIT:
DRAWN	${}^{\pm 5}{}_0$ ${}^{\pm 0.3}{}_0$ ${}^{\pm 0.2}{}_0$ ${}^{\pm 0.05}{}_0$	mm
CHECKED	25/04/08	DRAWN NAME
APPROVED	/ /	PRODUCT NO.
	SIZE A4 REV A	FILE NAME:

KLS Electronic Co.,LTD

B

A	SATA 7P 板端反向90度 SMT型	1	2	3	4	5	6	7	8	9
---	----------------------	---	---	---	---	---	---	---	---	---

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1.MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2.FINISH:

Contact: 3u" Gold/Tin plating on contact area

over all PEG: 100u" min.Tin-Lead Plating

over all soldertails 50u" min.Nickel underplating

soldertails over all MIN 100u" min.Tin-Lead plating on

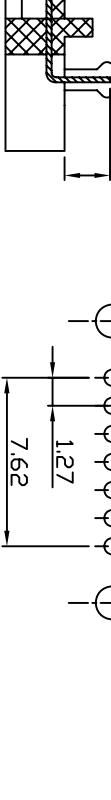
soldertails over all MAX 50u" min.Nickel underplating

over all MIN 6.37

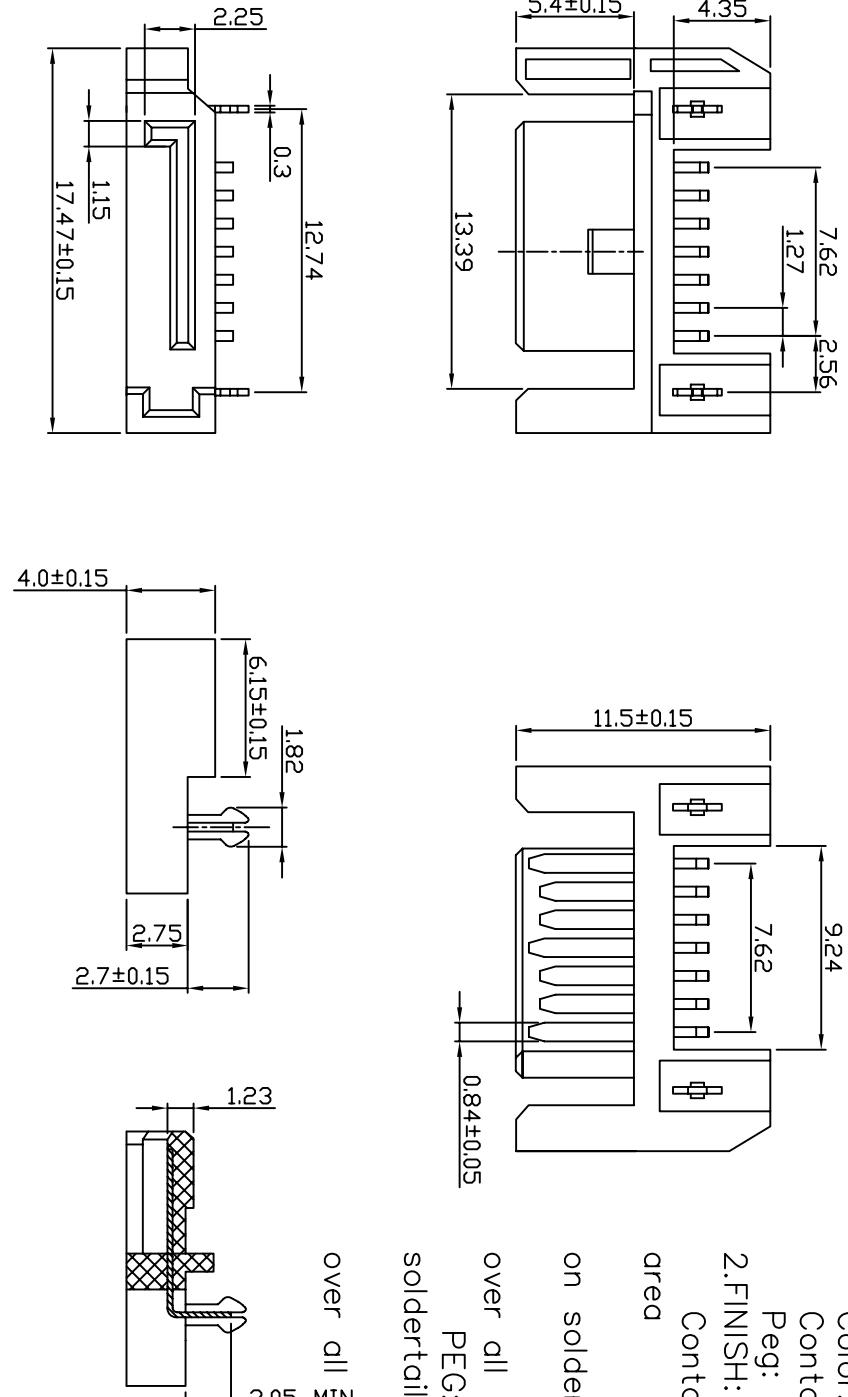
over all MAX 7.62

over all MIN 1.27

over all MAX 2-φ1.5



## PCB LAYOUT



B

SPECIFIED TOLERANCE		UNLESS OTHERWISE
SCALE	ANGLE	UNIT: mm
DRAWN 李北林	${}^{\pm 5}{}^{\circ}$ 0 .00	mm
CHECKED	${}^{\pm 0.3}$ ${}^{\pm 0.05}$	
APPROVED	/ /	PRODUCT NO.
	SIZE A4	REV A
		FILE NAME:

B

KLS Electronic CO.,LTD

C

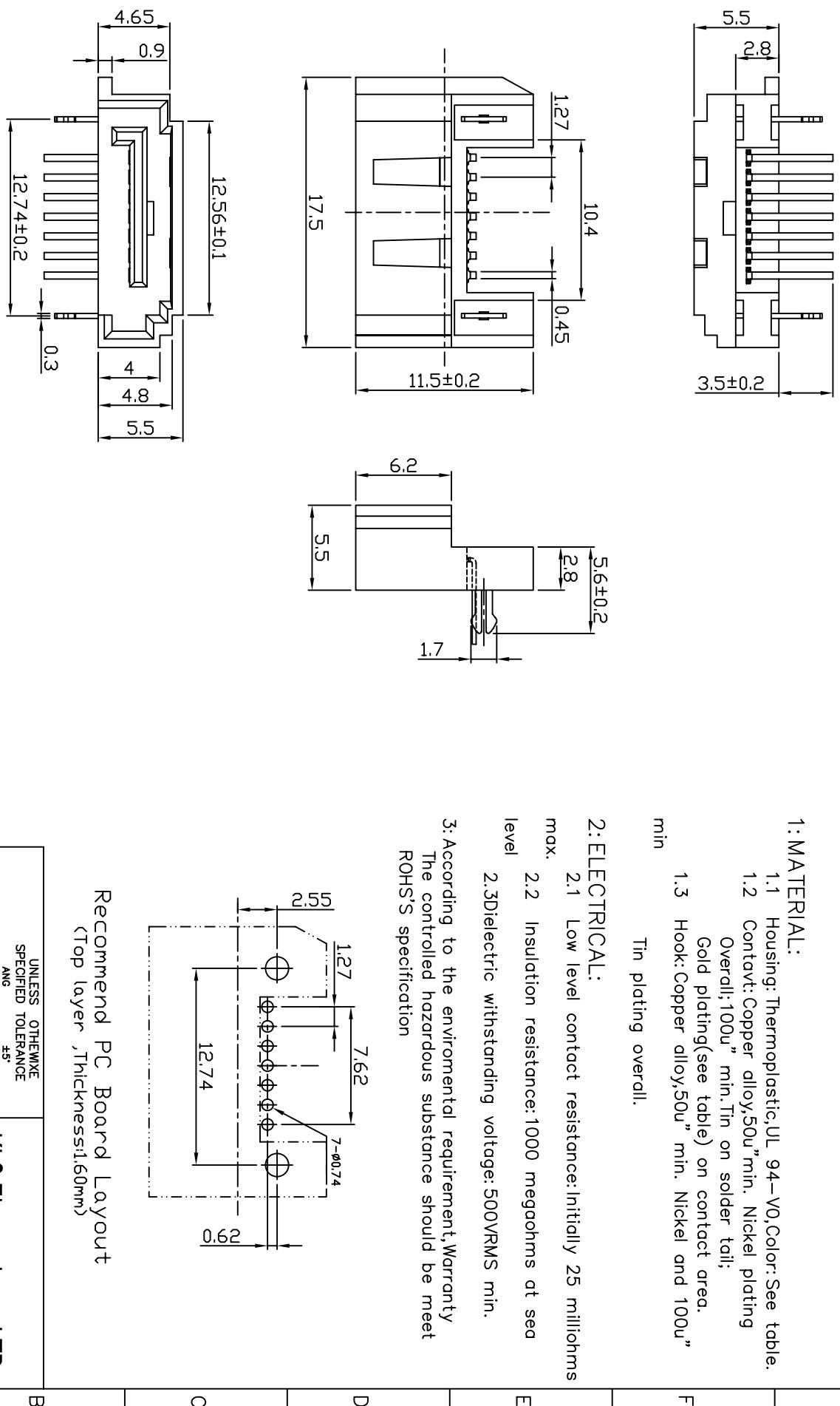
A

SATA 7P 板端反向90度 DIP型

1      2      3      4      5

6      7      8      9

G



**NOTES:**

1: MATERIAL:

1.1 Housing: Thermoplastic, UL 94-V0, Color: See table.  
 1.2 Contavt: Copper alloy 50 $\mu$  min. Nickel plating

Overall: 100u" min. Tin on solder tail;  
Gold plating(see table) on contact area.

min. Nickel and 100u

2: ELECTRICAL:

max. 2.1 Low level contact resistance: initially 25 millionohms

2.2 Insulation resistance: 1000 megaohms at see

2.3 Dielectric withstand voltage: 500VRMS min.

3: According to the environmental requirement, Warranty The controlled hazardous substance should be meet ROHS'S specification

## Recommend PC Board Layout (Top layer ,Thickness:1.60mm)

UNLESS OTHERWISE SPECIFIED TOLERANCE			
SCALE	0.00	±0.3	±5"
DRAWN	L1 B1 L1N	23/02/09	DRAWN NAME Pin header 2.0mm
CHECKED	/	/	PRODUCT NO.
APPROVED	/	/	FILE NAME:
	SIZE A4	REV A	KLS Electronic Co.,LTD

1      2      3      4      5      6      7      8      9

G

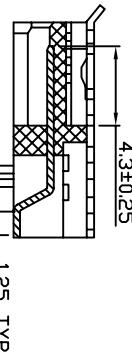
### SPECIFICATIONS

1.MATERIAL:  
Housig: LCP UL 94V-0  
Color: Black  
Contact: Phosphor bronze  
Peg: Brass

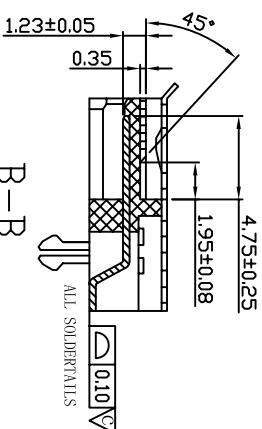
2.FINISH:  
Contact: 3u" Gold/Tin plating on contact area  
100u" min.Tin-Lead Plating on  
soldertails

PEG: 50u" min.Nickel underplating over all  
50u" min.Tin-Lead plating on soldertails  
50u" min.Nickel underplating over all

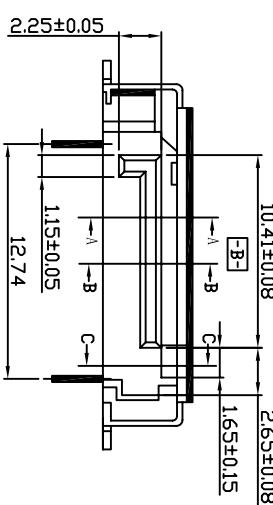
A-A



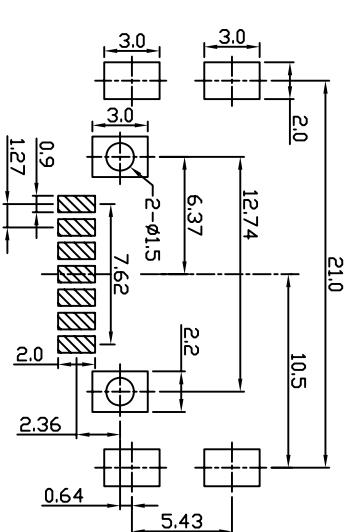
B-B



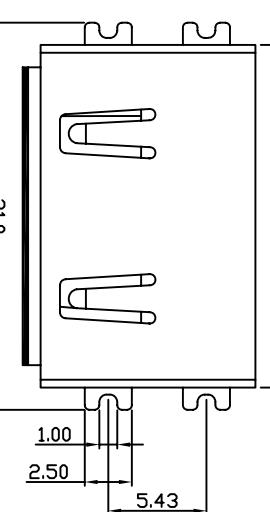
E



E



E



F

### PCB LAYOUT

SPECIFIED TOLERANCE		UNLESS OTHERWISE
SCALE	ANGLE	UNIT:
DRAWN	0° .00	mm

KLS Electronic CO.,LTD

DRAWN LI BEI LIN 16/08/08 DRAWN NAME

SCALE

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UNIT:

mm

ANGLE

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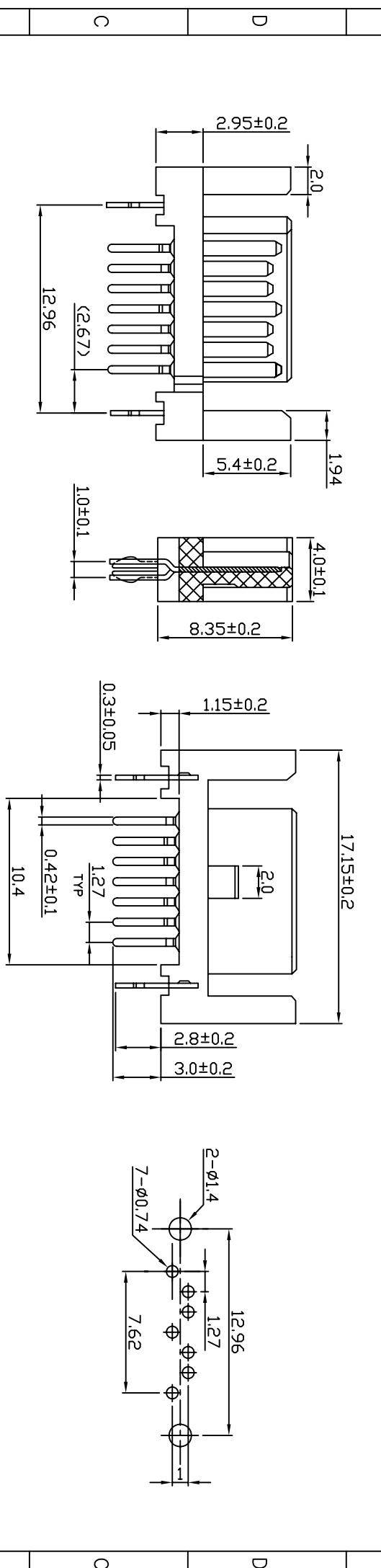
0.05

0.05

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

Current Rating: 3Amps  
 Insulator Resistance: 5000m $\Omega$  Min  
 Dielectric Withstanding: AC 500V  
 Operating Temperature: -40° to +105°  
 Contact Material: Copper alloy  
 Insulator Material: Polyester, UL 94V-0  
 LCP  
 Finish : Tin,Gold or Duplex plated  
 Standard : Gold flash all over  
 Max.Processing Temp: 230°C for  
 30-60seconds(260C for 10 seconds)



A	B	C	D	E	F	G
SATA 7P A TYPE 双排插板式						

1      2      3      4      5      6      7      8      9

**KLS Electronic CO., LTD**

B

UNLESS OTHERWISE SPECIFIED TOLERANCE	
ANG	.00
$\pm 5^\circ$	$\pm 0.3$
$\pm 0.05$	

SCALE

DRAWN 李北林 08/10/07 DRAWN NAME

UNIT:

mm

CHECKED

Pin header 2.0mm

APPROVED

/ / PRODUCT NO.

SIZE A4 REV A

FILE NAME:

A

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1.MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2.FINISH:

Contact: 3u" Gold/Tin plating on contact area

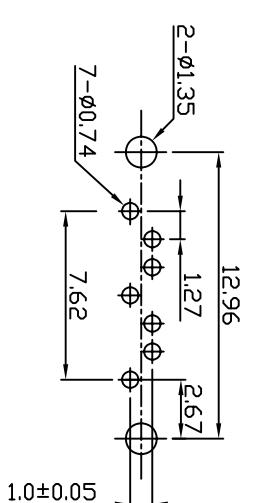
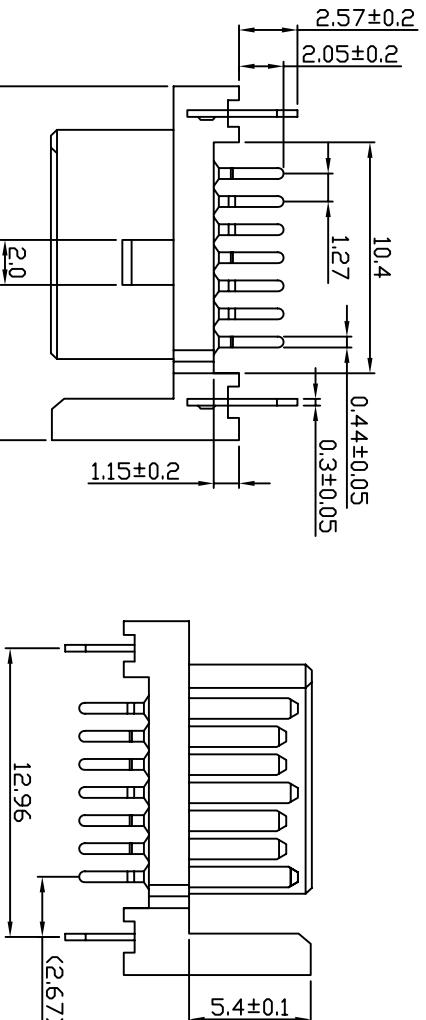
100u" min.Tin-Lead Plating on

soldertails 50u" min.Nickel underplating over

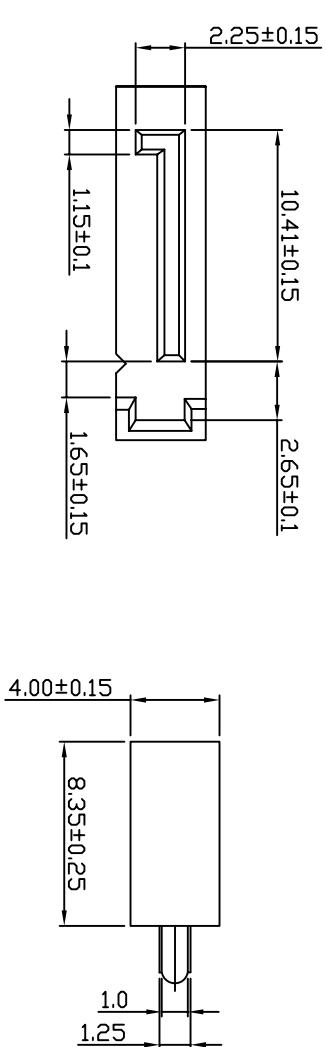
### all PEG:

100u" min.Tin-Lead plating on

50u" min.Nickel underplating over all



Recommend PC Board Layout



UNSPECIFIED TOLERANCE	ANGLE	SCALE	UNIT:	KLS Electronic CO.,LTD	
$\pm 5^\circ$	$0^\circ$	.00	mm	DRAWN BY	Li Bei Lin

DRAWN BY Li Bei Lin

KLS Electronic CO.,LTD

B

CHECKED

SATA 7P A TYPE

A

APPROVED

/ / PRODUCT NO.

A

1      2      3      4      5      6      7      8      9

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

1      2      3      4      5      6      7      8      9

G

NOTES:

1: MATERIAL:

1.1 Housing: Thermoplastic,UL 94-V0,Color: See table.

1.2 Contact: Copper alloy,50μ" min. Nickel plating  
Overall;100μ" min.Tin on solder tail;  
Gold plating(see table) on contact area.

1.3 Hook: Copper alloy,50μ" min. Nickel and 100μ"  
min Tin plating overall.

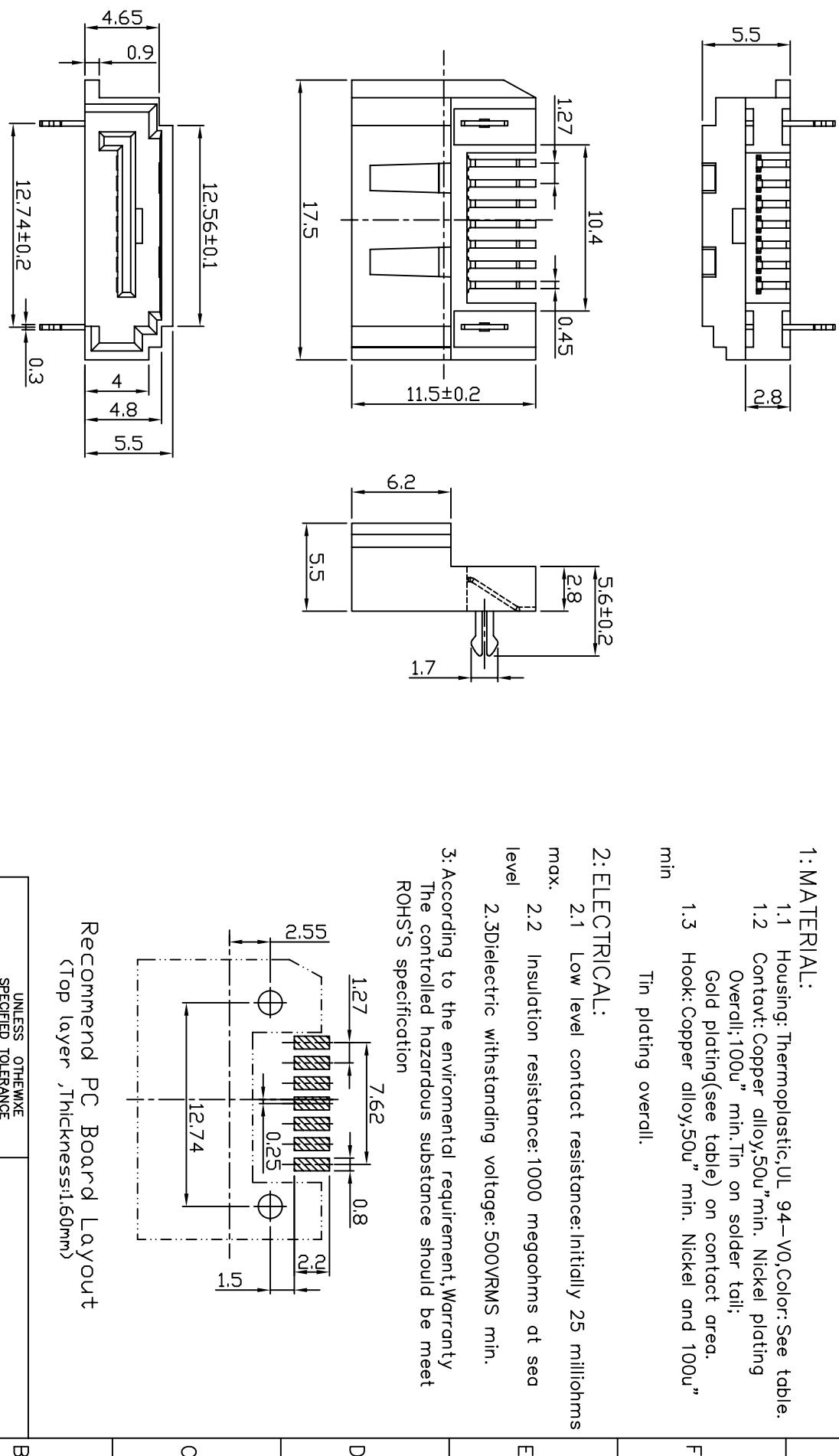
2:ELECTRICAL:

2.1 Low level contact resistance: Initially 25 millionohms  
max.

2.2 Insulation resistance:1000 megaohms at sea  
level

2.3 Dielectric withstand voltage:500VRMS min.

3: According to the environmental requirement,Warranty  
The controlled hazardous substance should be meet  
ROHS's specification

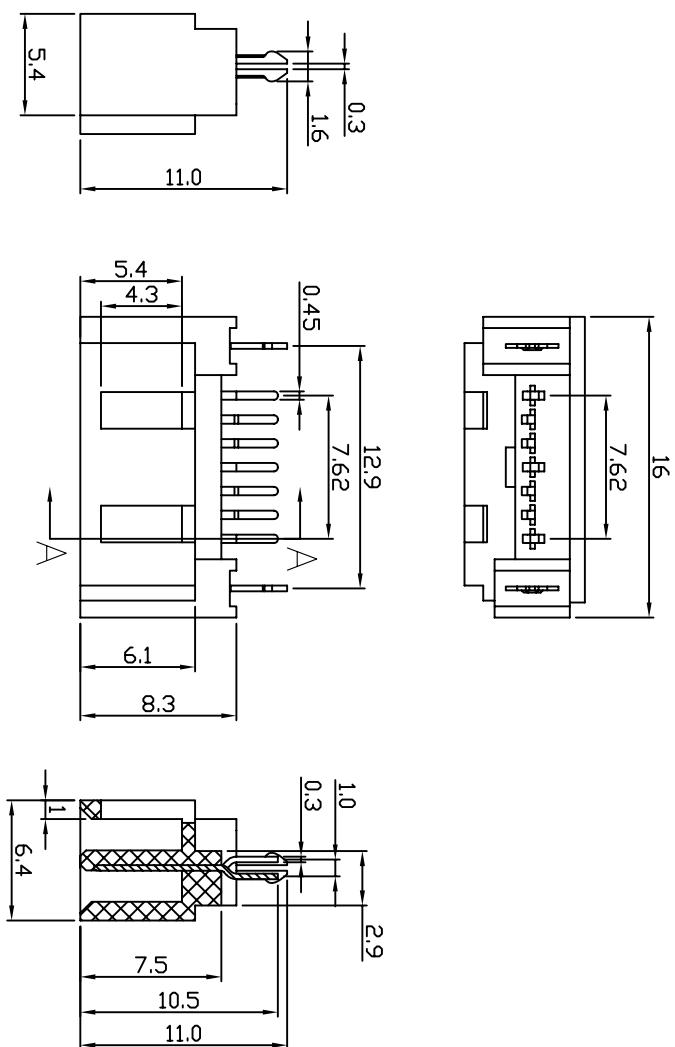


A	SATA 7P 半包开窗 SMT	1	2	3	4	5	6	7	8	9
---	------------------	---	---	---	---	---	---	---	---	---

1      |      2      |      3      |      4      |      5      |      6      |      7      |      8      |      9

## SPECIFICATIONS

Current Rating: 3Amps  
 Insulator Resistance: 5000m $\Omega$  Min  
 Dielectric Withstanding: AC 500V  
 Operating Temperature: -40° to +105°  
 Contact Material: Copper alloy  
 Insulator Material: Polyester, UL 94V-0  
 LCP  
 Finish : Tin, Gold or Duplex plated  
 Standard : Gold flash all over  
 Max.Processing Temp: 230°C for  
 30–60 seconds(260°C for 10 seconds)



SPECIFIED TOLERANCE	
ANG	±5°
0°	±0.3°
.00	±0.2°
SCALE	±0.05
DRAWN	08/10/07
CHECKED	
APPROVED	
SIZE A4	REV A
DATE NAME:	

KLS Electronic Co., LTD

A	SATA 7P 180° 四面包	1	2	3	4	5	6	7	8	9
---	------------------	---	---	---	---	---	---	---	---	---

1

2

3

4

56

7

8

9

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

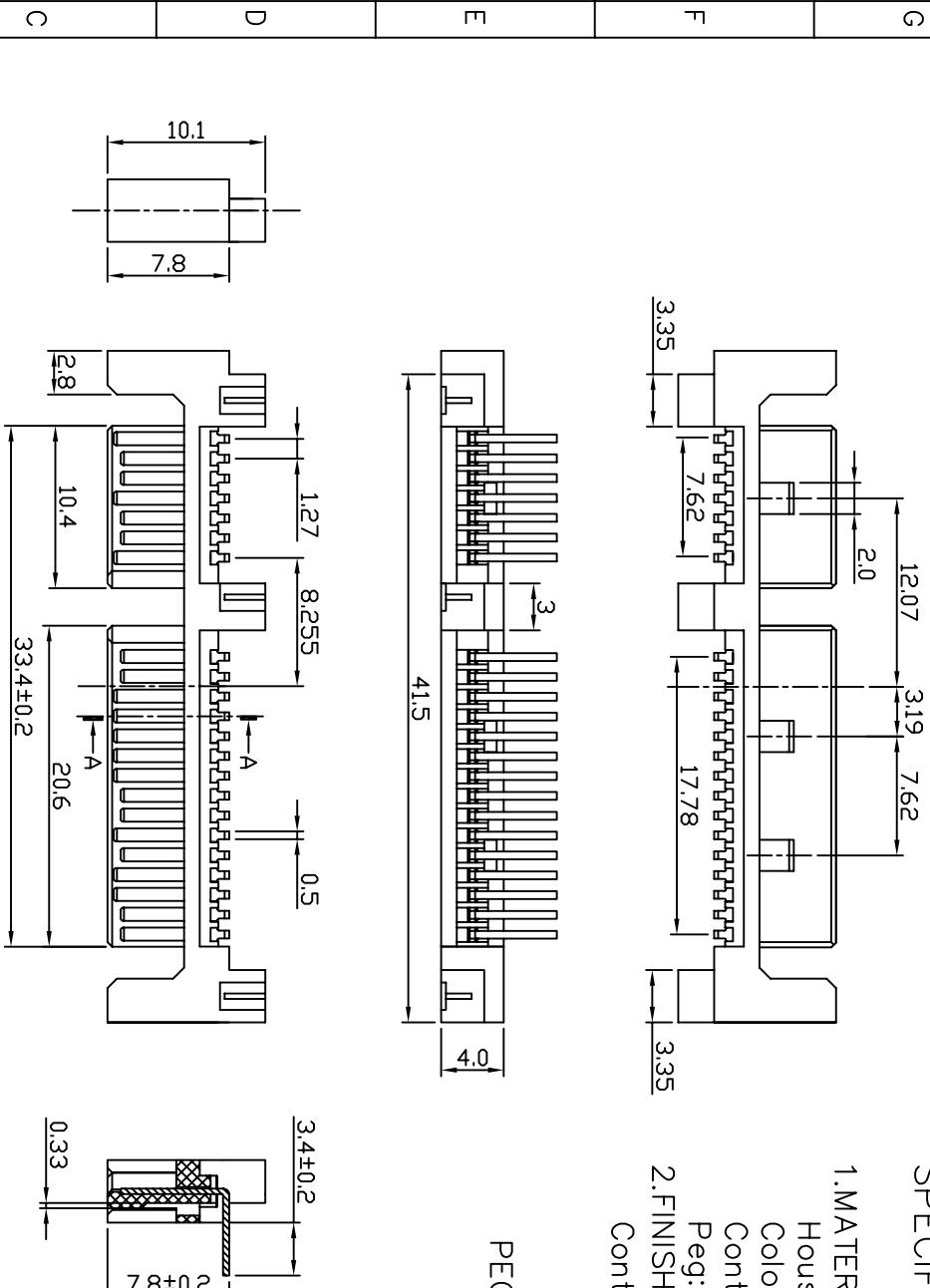
Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2. FINISH:

Contact: 3u" Gold/Tin plating on contact area  
 100u" min. Tin-Lead Plating on soldertails  
 50u" min. Nickel underplating over all  
 50u" min. Nickel underplating over all



A-A SECTION

## PCB LAYOUT

SPECIFIED TOLERANCE		KLS Electronic CO.,LTD
ANGLE	0.00	
SCALE	UNIT: mm	
DRAWN	L1 BEIJ LIN	06/04/09
CHECKED		DRAWN NAME
APPROVED	/ /	PRODUCT NO.
	SIZE A4 REV A	FILE NAME:

SATA 7+15P 公座反向90度DIP型

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

1

2

3

4

56

11

7

8

9

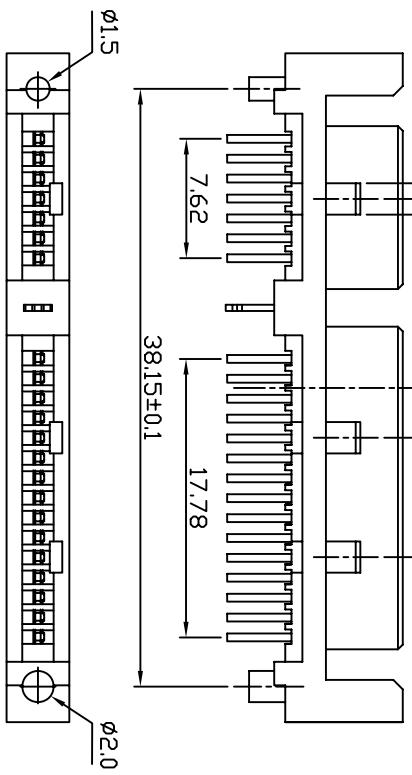
G

12.06  
3.19  
7.62  
2.0  
8.2  
7.5  
1.6  
38.15±0.1  
1.27  
8.255  
A  
0.5  
2.7  
10.4  
33.4±0.2  
20.6  
3.0±0.2  
0.33  
9.8±0.2  
1.15  
2.26  
42.7±0.2

### SPECIFICATIONS

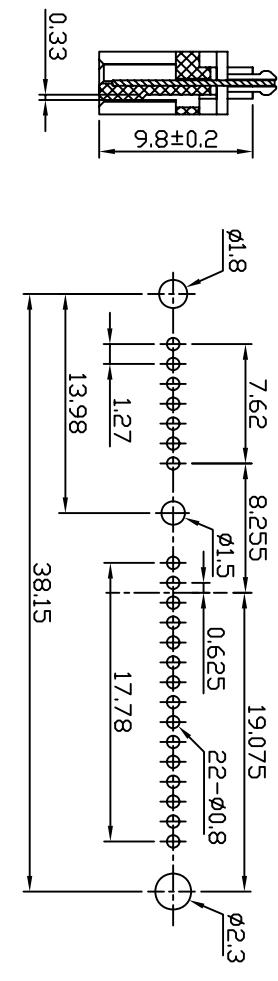
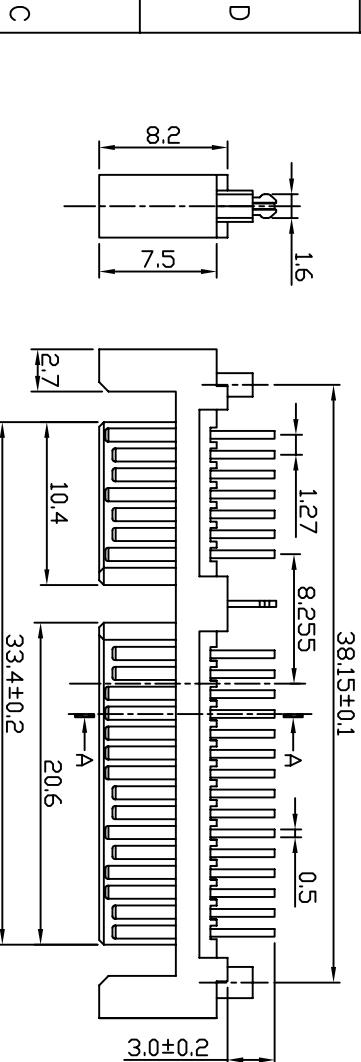
1.MATERIAL:  
Housig: LCP UL 94V-0  
Color: Black  
Contact: Phosphor bronze  
Peg: Brass

2.FINISH:  
Contact: 3u" Gold/Tin plating on contact area  
100u" min. Tin-Lead Plating on soldertails  
50u" min.Nickel underplating over all  
PEG: 100u" min.Tin-Lead plating on soldertails  
50u" min.Nickel underplating over all



A-A SECTION

7.62  
8.255  
 $\phi 1.5$   
0.625  
22- $\phi 0.8$   
1.27  
17.78  
38.15  
 $\phi 1.8$   
 $\phi 2.3$



### PCB LAYOUT

SPECIFIED TOLERANCE		KLS Electronic CO.,LTD
ANGLE	UNIT: mm	
0° 0.00	±0.3 ±0.2 ±0.05	

SCALE	UNIT: mm	DRAWN NAME	PRODUCT NO.
DRAWN LI BEI LIN	07/21/07	SATA 7+15	
CHECKED			
APPROVED	/ /	FILE NAME:	

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

A	SATA 7+15P 公座180度帶柱帶魚叉DIP型
---	----------------------------

B	
---	--

1

2

3

4

56

7

8

9

## SPECIFICATIONS

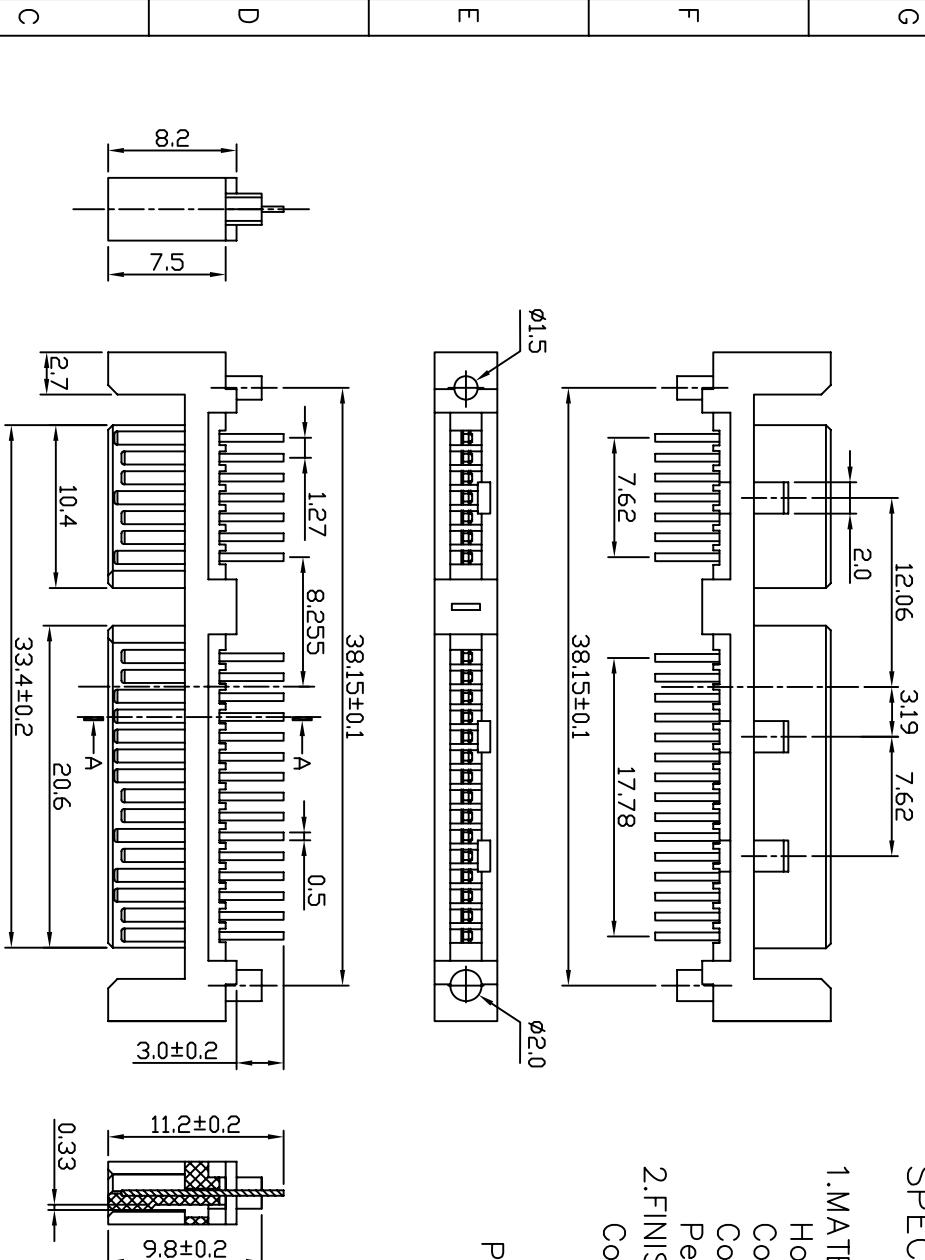
### 1. MATERIAL:

Housing: LCP UL 94V-0  
Color: Black

Contact: Phosphor bronze  
Peg: Brass

### 2. FINISH:

Contact: 3u" Gold/Tin plating on contact area  
100u" min. Tin-Lead Plating on soldertails  
50u" min. Nickel underplating over all  
PEG: 100u" min. Tin-Lead plating on soldertails  
50u" min. Nickel underplating over all



A-A SECTION

## PCB LAYOUT

SPECIFIED TOLERANCE		KLS Electronic CO.,LTD
ANGLE	UNIT: mm	
0°	.00 ±.05	
	.00 ±.03	
	.00 ±.02	
	.00 ±.05	

1	2	3	4	5	6	7	8	9
SATA 7+15P 公座180度DIP型 带柱								
A	B	C	D	E	F	G		

B

C

D

E

F

G

A

→

N

1

၁၁

8

10

## SPECIFICATIONS

1. MATERIAL:			
Housig:	LCP	UL	94V-0
Color:	Black		
Contact:	Phosphor	bronze	
Peg:	Brass		
? FINISH:			

Contact: 3u" Gold/Tin plating on contact area  
100u" min Tin-lead Plating on

Gold/Tin plating on contact area  
100 μm min Tin and Plating on solder tails

The diagram illustrates a DIPGA package with two rows of pins. Key dimensions are indicated: the total width of the package is 17.78 mm, the height of one row of pins is 7.62 mm, and the height of the package from the bottom of the pins to the top of the body is 12.06 mm. The distance between the centers of the two rows of pins is 3.35 mm. The thickness of the package body is 2.0 mm. The overall height of the package, including the pins, is 3.19 mm.

PEG: 100u" min. Tin-Lead plating on soldertails  
50u" min. Nickel underplating over all

This technical drawing illustrates a dual row surface-mount component, possibly a memory chip, with two rows of leads. The top row has a total width of 1.27 mm, with a gap of 8.255 mm between the two rows. The bottom row has a total width of 20.6 mm, with a gap of 0.5 mm between the two rows. The overall height of the component is 33.4 ± 0.2 mm. The top row features a lead labeled 'A' with a width of 2.8 mm and a height of 10.4 mm. The bottom row features a lead labeled 'A' with a width of 2.8 ± 0.2 mm and a height of 9.8 ± 0.2 mm. A dimension of 0.33 is shown for the gap between the bottom row and the substrate.

## A-A SECTION

PCB LAYOUT

		KLS Electronic co., LTD	
		DRAWN NAME: SATA 7+15	
		PRODUCT NO.: PILE NAME:	
		SCALE UNIT: mm	
DRAWN	L.I BEI LIN	07/21/07	
CHECKED			
APPROVED	/ /		
	SIZE A4 REV A		

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0  
Color: Black  
Contact: Phosphor bronze  
Peg: Brass

### 2. FINISH:

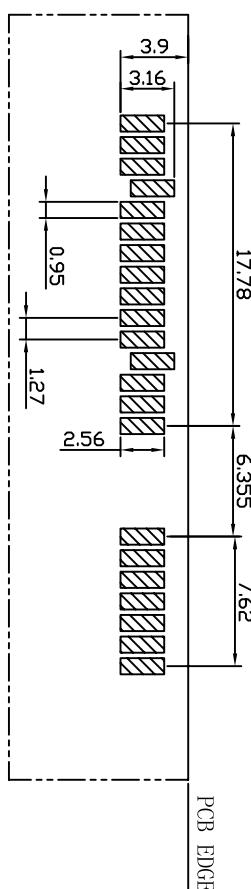
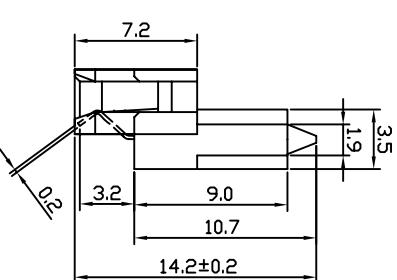
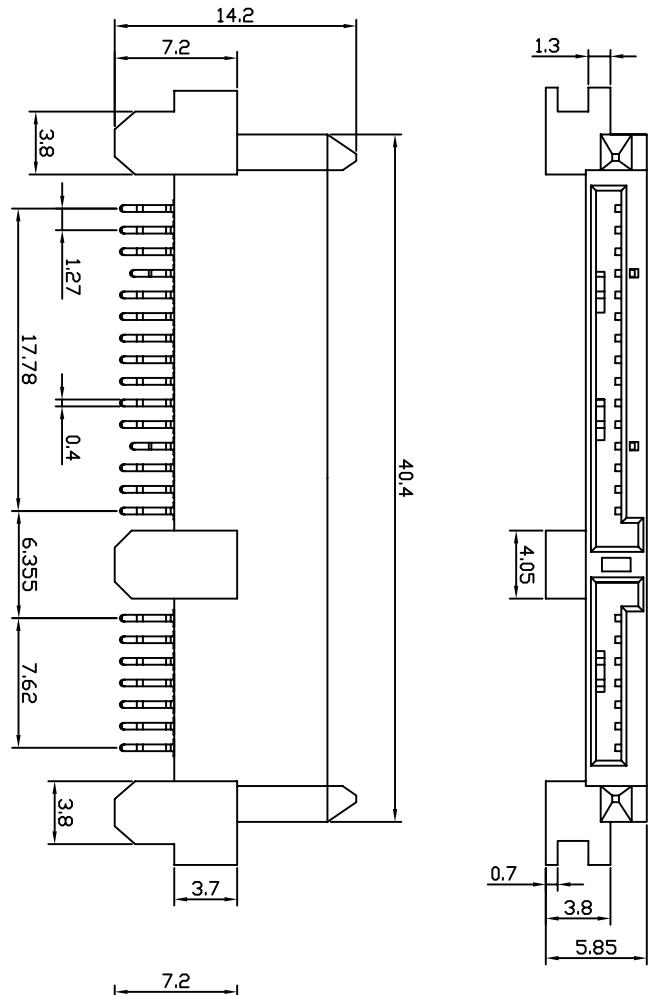
Contact: 3u" Gold/Tin plating on contact area

100u" min.Tin-Lead Plating  
on soldertails 50u" min.Nickel underplating

over all PEG: 100u" min.Tin-Lead plating on  
soldertails 50u" min.Nickel underplating

over all over all

over all over all



RECOMMEND PCB LAYOUT (T=1.2)  
PCB TOLERANCE:  $\pm 0.05$

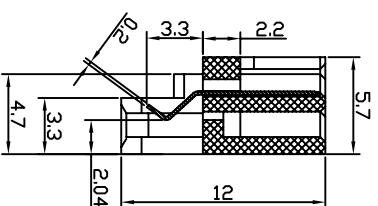
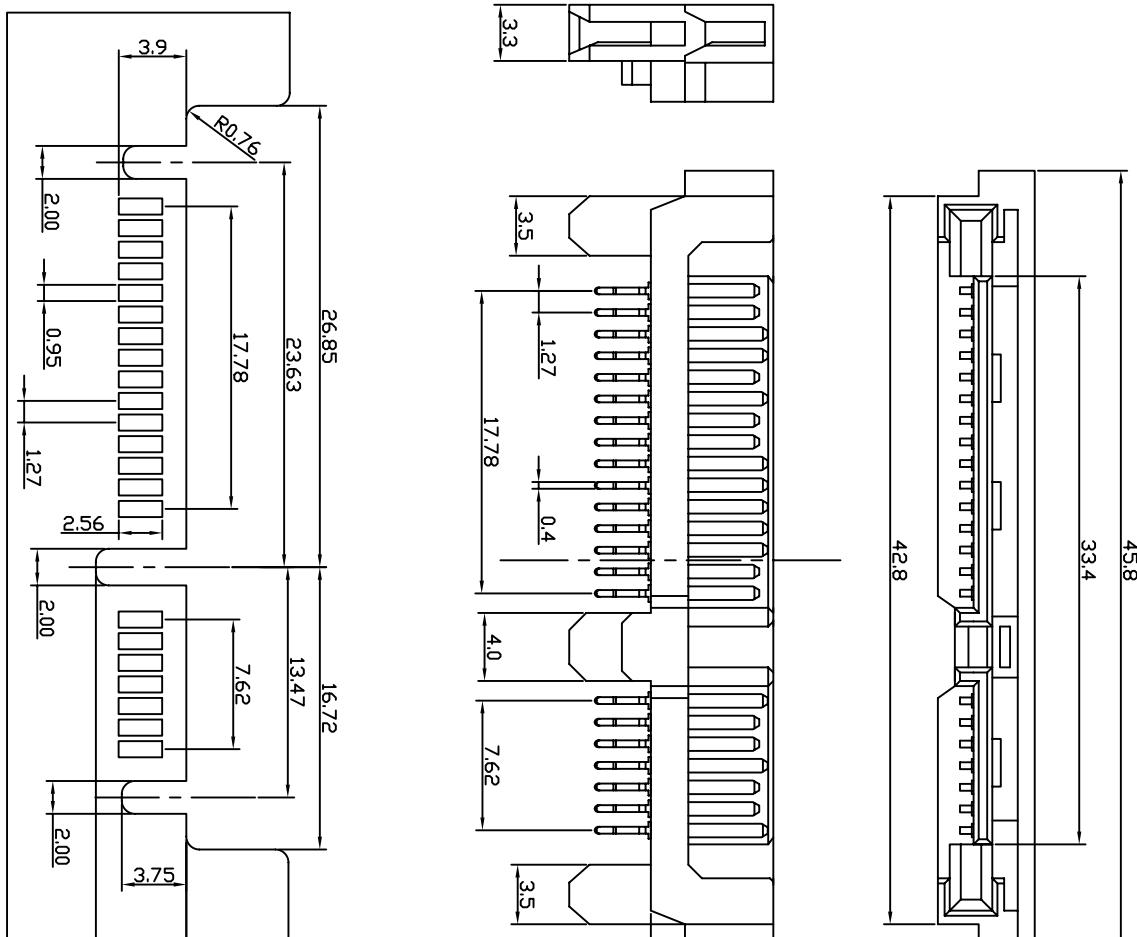
SPECIFIED TOLERANCE		UNLESS OTHERWISE
ANGLE	ANGLE	ANGLE
0	0	$\pm 5^\circ$
.00	.00	$\pm 0.3^\circ$
		$\pm 0.2^\circ$
		$\pm 0.05^\circ$

KLS Electronic CO.,LTD

A	SATA 7+15P 夹板母头	1	2	3	4	5	6	7	8	9
B	C	D	E	F	G					

→ 12 13 14 15 16 17 18 19 20

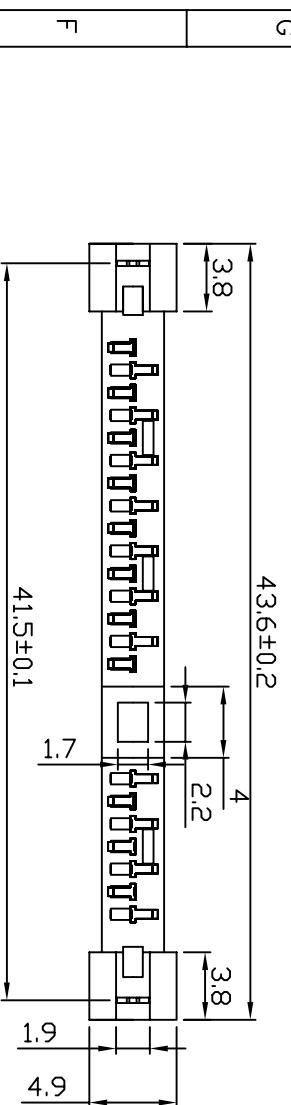
## SPECIFICATIONS



		KLS Electronic CO., LTD									
<p style="text-align: center;">UNLESS OTHERWISE SPECIFIED TOLERANCE</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>ANG</td> <td><math>\pm 5^\circ</math></td> </tr> <tr> <td>0.00</td> <td><math>\pm 0.3</math></td> </tr> <tr> <td>0.00</td> <td><math>\pm 0.2</math></td> </tr> <tr> <td>0.00</td> <td><math>\pm 0.05</math></td> </tr> </table>				ANG	$\pm 5^\circ$	0.00	$\pm 0.3$	0.00	$\pm 0.2$	0.00	$\pm 0.05$
ANG	$\pm 5^\circ$										
0.00	$\pm 0.3$										
0.00	$\pm 0.2$										
0.00	$\pm 0.05$										
SCALE	UNIT:	DRAWN NAME: SATA 7+15									
DRAWN	Li Bei Lin	09/07/07	PRODUCT NO.								
CHECKED		/									
APPROVED		/									
	SIZE A4	REV A	FILE NAME:								

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS



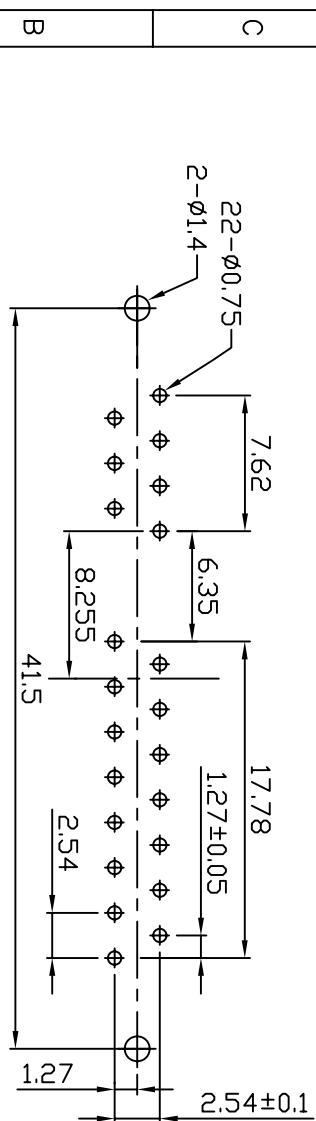
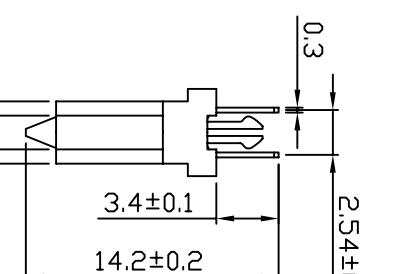
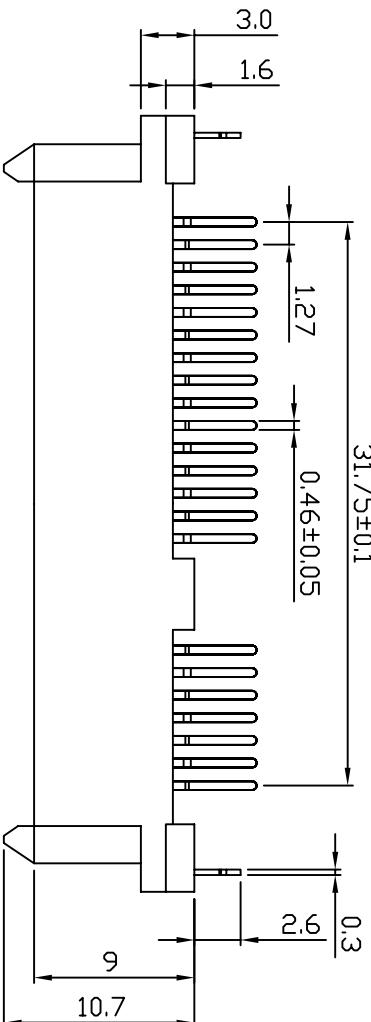
1. MATERIAL:  
Housig: LCP UL 94V-0  
Color: Black  
Contact: Phosphor bronze  
Peg: Brass

2. FINISH:  
Contact: 3u" Gold/Tin plating on contact  
area

on soldertails 50u" min.Nickel underplating

over all 100u" min.Tin-Lead plating on  
PEG: 50u" min.Nickel underplating

over all 100u" min.Tin-Lead Plating



## PCB LAYOUT

UNLESS OTHERWISE  
SPECIFIED TOLERANCE  
ANG  $\pm 5^\circ$   
0.00  $\pm 0.3^\circ$   
0.00  $\pm 0.2^\circ$   
0.00  $\pm 0.05^\circ$

SCALE: DRAWN: 1:1 BEI LIN  
CHECKED: 07/21/07  
APPROVED:

KLS Electronic CO.,LTD

B C D E F G

A	SATA 7+15 硬板胶芯 带鱼叉 双排长端
1	2

1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G		

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

### 2. FINISH:

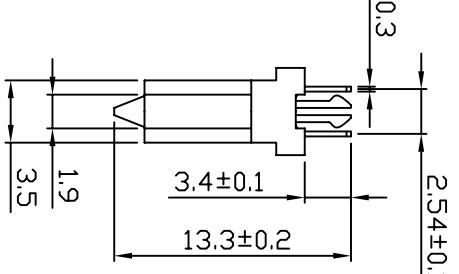
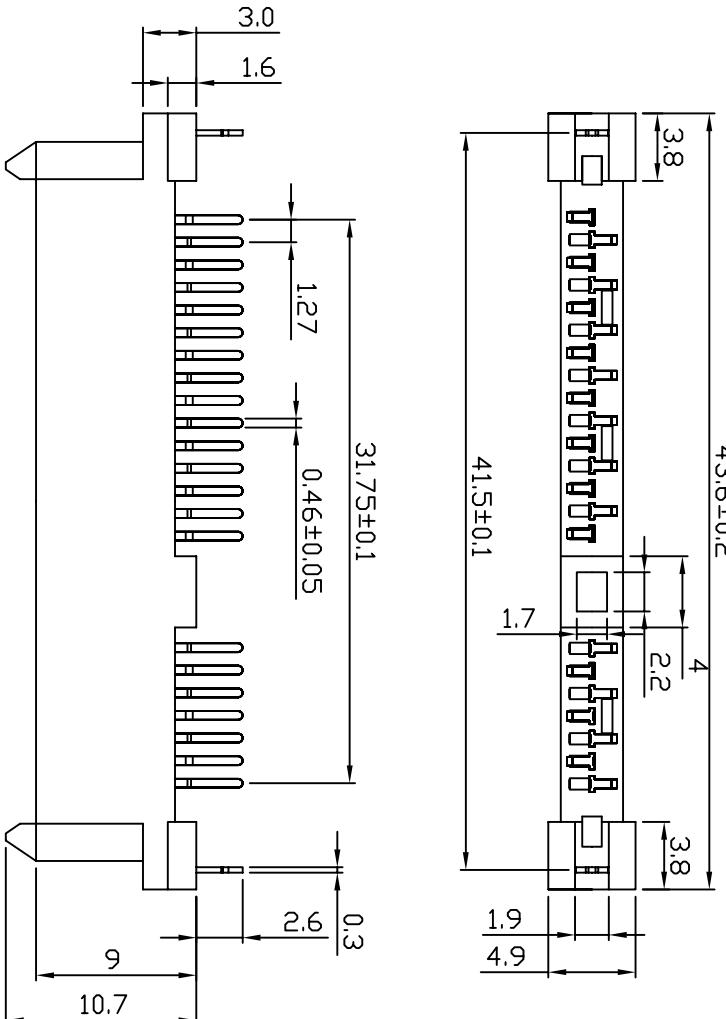
Contact: 3u" Gold/Tin plating on contact area

on soldertails

50u" min.Nickel underplating over all

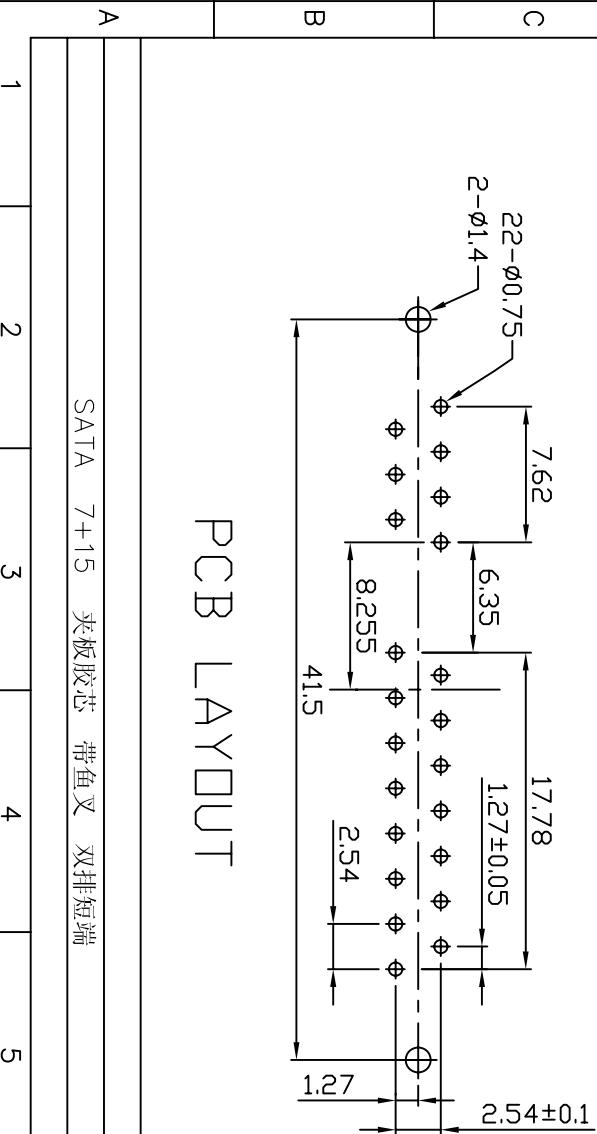
PEG: 100u"min.Tin-Lead plating on soldertails

50u"min.Nickel underplating over all



## PCB LAYOUT

KLS Electronic CO., LTD



1      2      3      4      5

6      7      8      9

A	SATA 7+15 矫板胶芯 带鱼叉 双排短端	
B		

1      2      3      4      5

6      7      8      9

A

G

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2. FINISH:

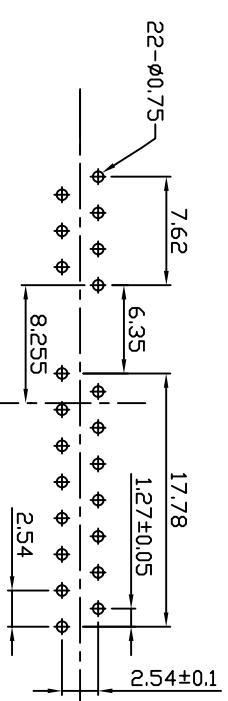
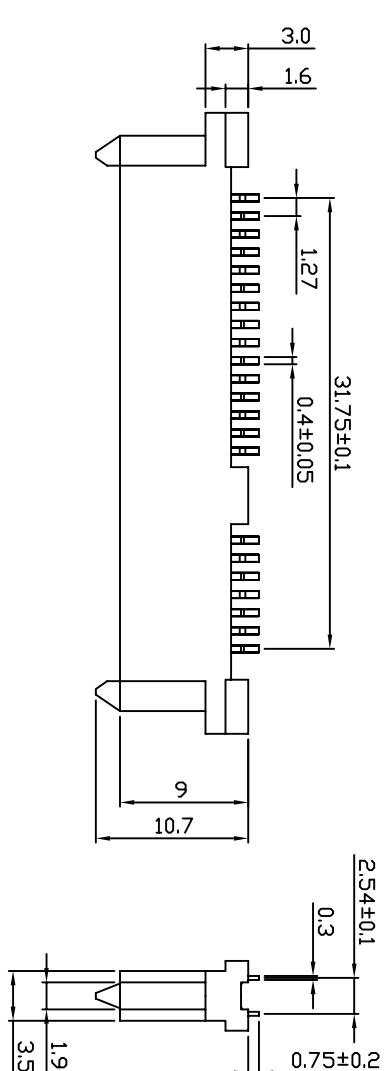
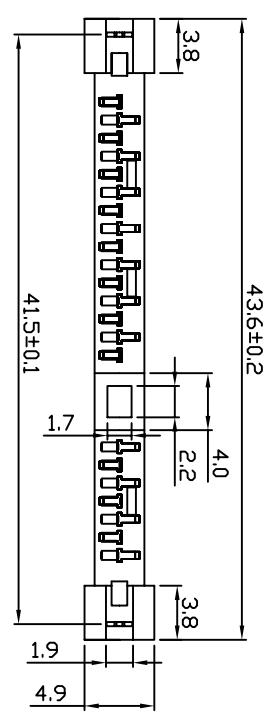
Contact: 3u" Gold/Tin plating on contact area

on soldertails 100u" min.Tin-Lead Plating over all 50u" min.Nickel underplating

50u" min.Nickel underplating over all

over all 100u" min.Tin-Lead plating on soldertails

50u" min.Nickel underplating over all



## PCB LAYOUT

SPECIFIED TOLERANCE		UNLESS OTHERWISE
ANGLE	ANG	±5°
SCALE	UNIT:	0.00
DRAWN L1 BEI LIN	07/21/07	DRAWN NAME
CHECKED		SATA 7+15
APPROVED	/ /	PRODUCT NO.
	SIZE A4 REV A	FILE NAME:

KLS Electronic CO., LTD

B

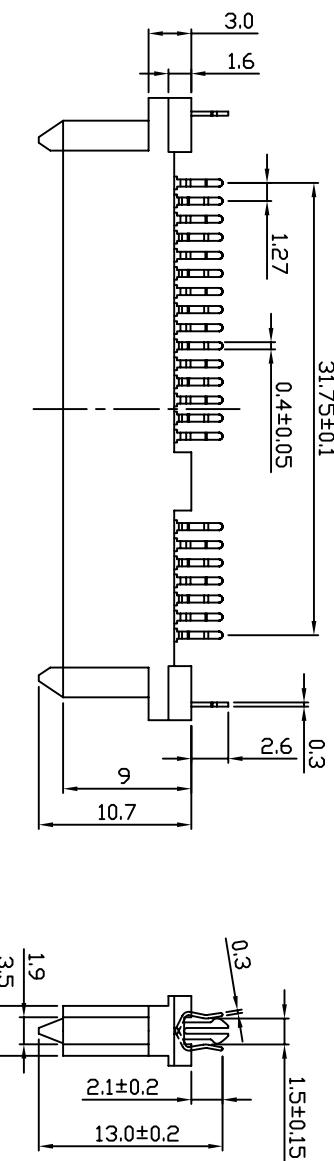
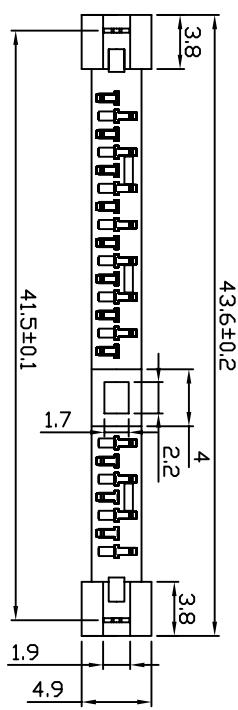
A	SATA 7+15	板芯	PC0.75mm
1	2	3	4
5	6	7	8
			9

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

1. MATERIAL:  
 Housing: LCP UL 94V-0  
 Color: Black  
 Contact: Phosphor bronze  
 Peg: Brass
2. FINISH:  
 Contact: 3u" Gold/Tin plating on contact area  
 on soldertails 100u" min.Tin-Lead Plating  
 over all 50u" min.Nickel underplating  
 PEG: 100u" min.Tin-Lead plating on  
 soldertails 50u" min.Nickel underplating

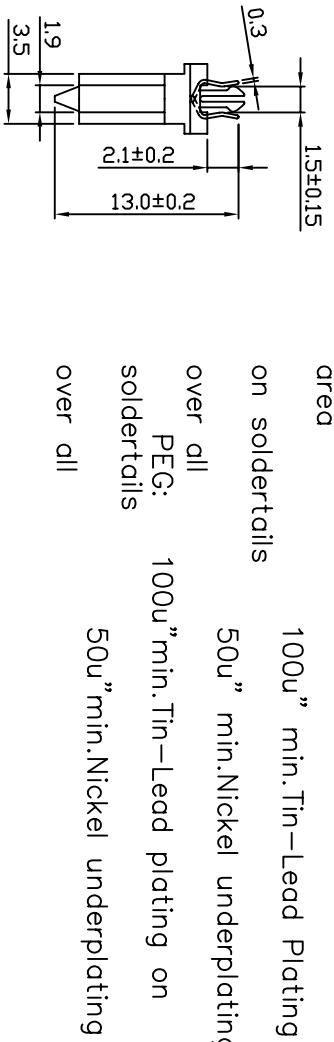
G



F

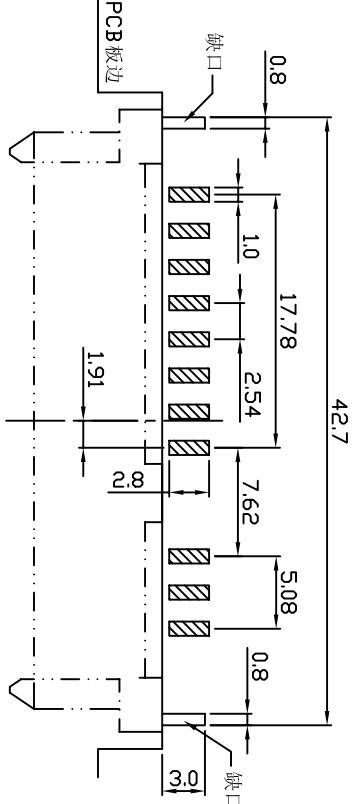
E

D

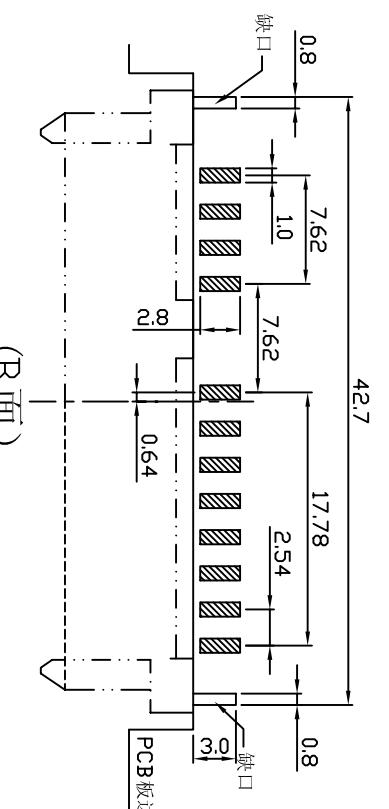


E

D



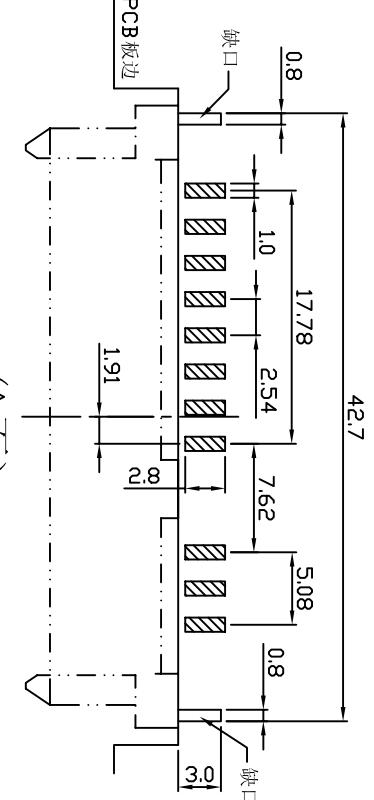
D



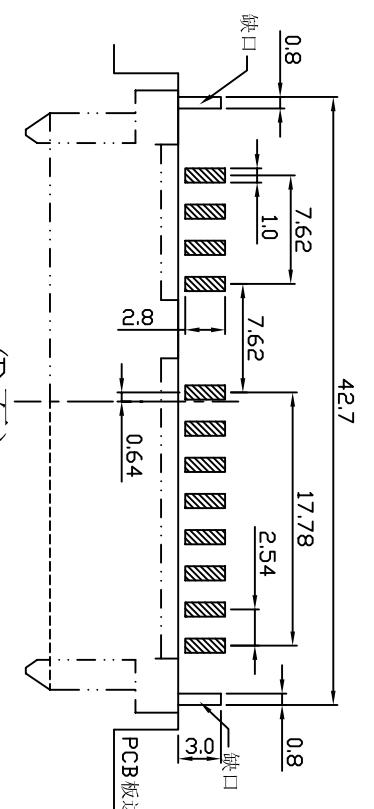
B

## PCB LAYOUT

(A)



(B)



C

C

C

KLS Electronic CO.,LTD

SPECIFIED TOLERANCE		UNIT:
ANG	±5°	
0.0	±0.3	mm
0.00	±0.2	
	±0.05	

SCALE 1:1 BEI LIN

DRAWN 07/21/07

CHECKED

APPROVED

DRAWN NAME

SATA 7+15

SIZE A4 REV A

FILE NAME:

A

A  
SATA 7+15 灰板1.6 带鱼叉

1      2      3      4

5      6      7

8      9

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1. MATERIAL:

Housing: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

### Peg:

Brass

### 2. FINISH:

Contact: 3u" Gold/Tin plating on contact area

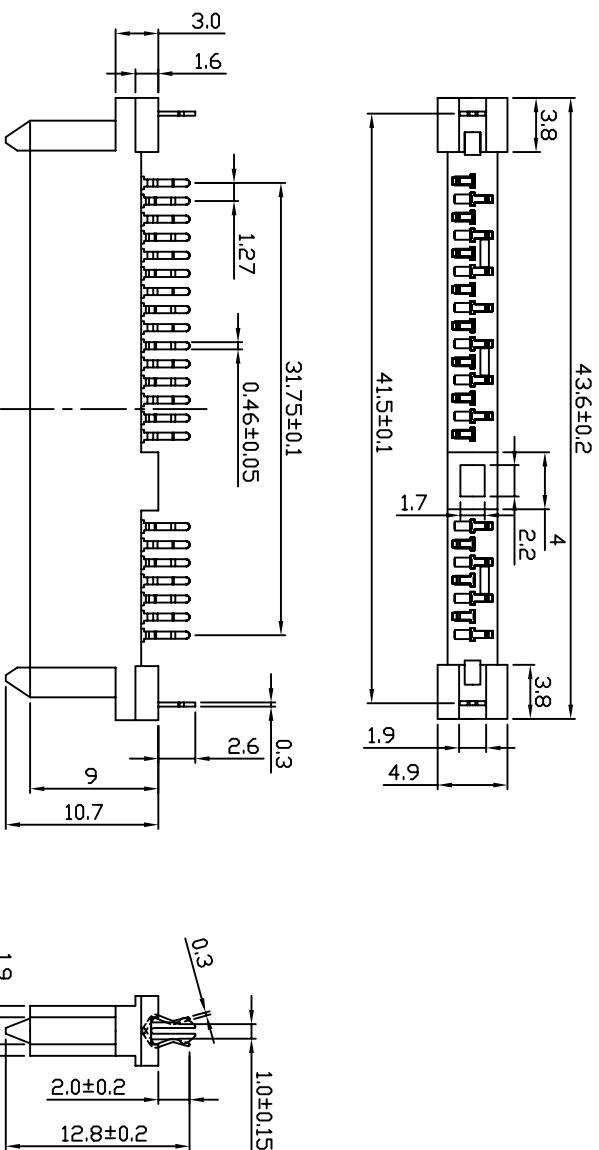
100u" min.Tin-Lead Plating

50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

soldertails 100u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating



over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

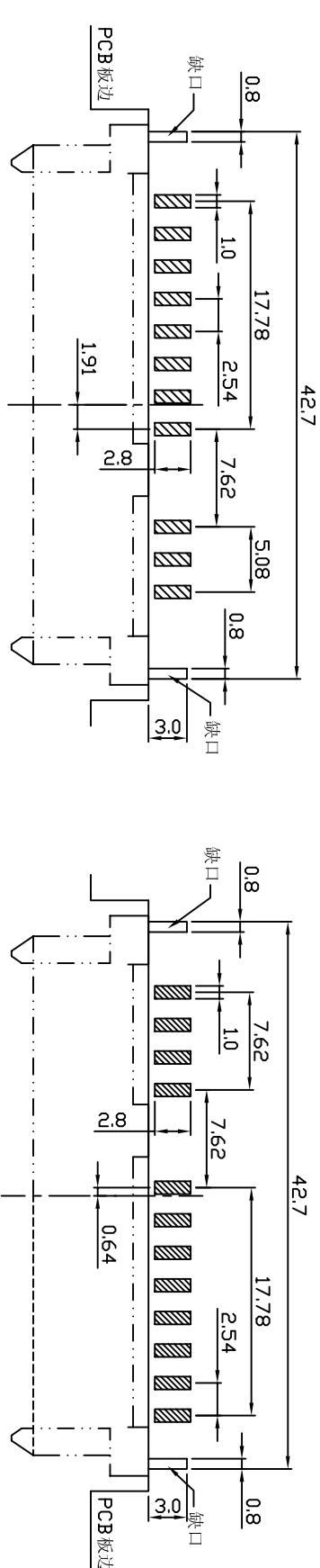
over all 50u" min.Nickel underplating

over all 50u" min.Tin-Lead plating on

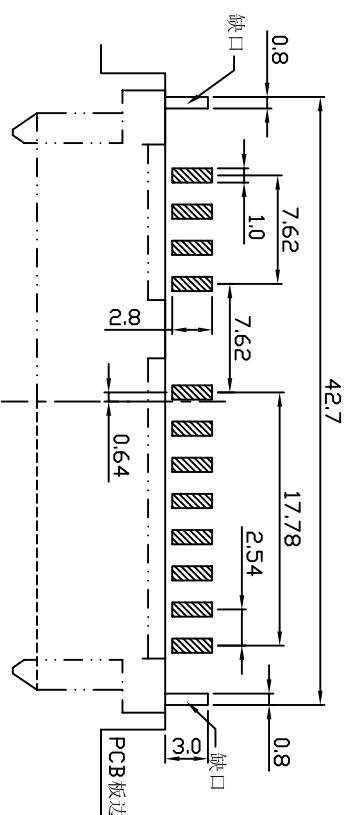
over all 50u" min.Nickel underplating

## PCB LAYOUT

(A 面)



(B 面)



**KLS Electronic Co.,LTD**

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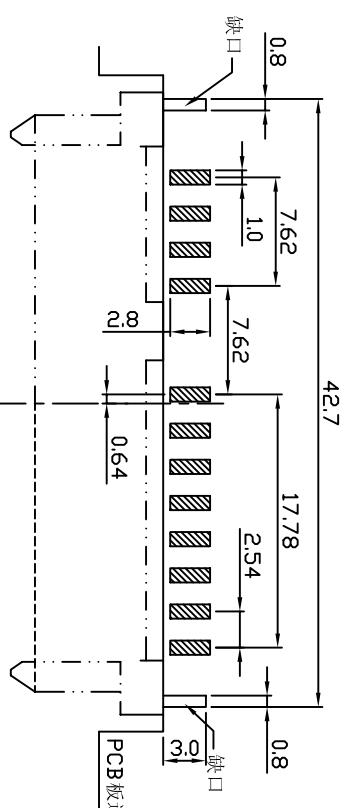
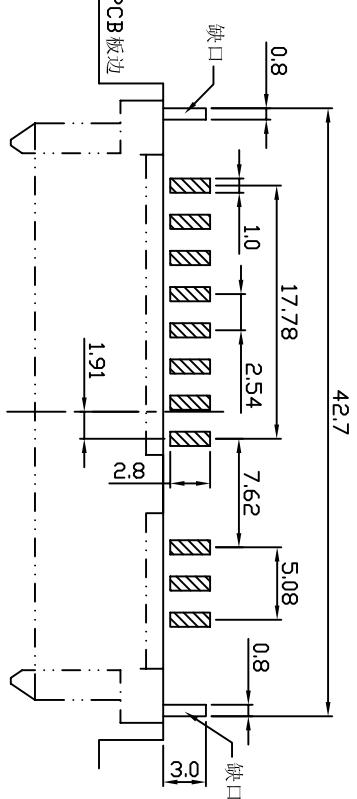
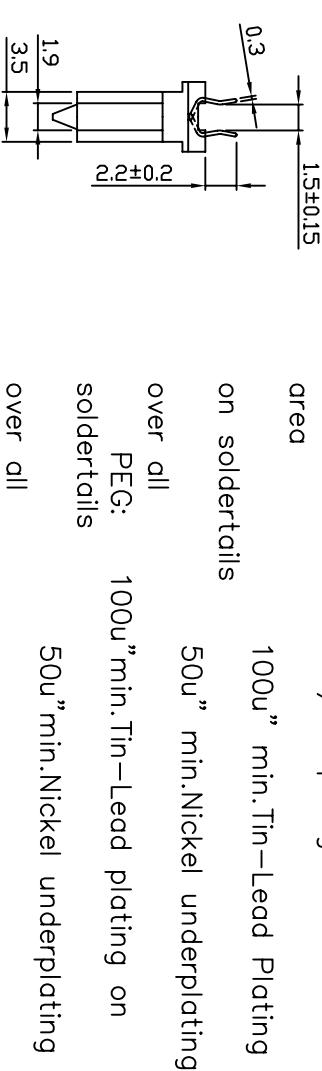
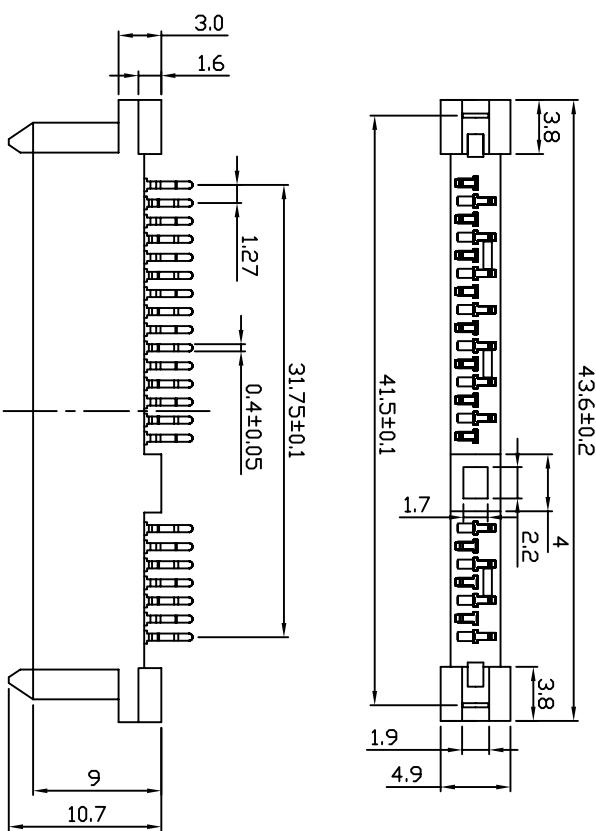
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## SPECIFICATIONS



PCB LAYOUT

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百  
百  
)

1.MATERIAL:			
Housig:	LCP	UL	94V-0
Color:	Black		
Contact:	Phosphor	bronze	
Peg:	Brass		
E.FINISH:			

LCP UL 94V-0  
Black  
Nosphor bronze  
Brass

Contact: 3u" Gold/Tin plating on contact area

100μ” min. Tin-Lead Plating  
on soldertails

over all 50u" min. Nickel underplating

over  $100\mu$ " min. Tin-Lead plating on  
solder pins

50μ” min. Nickel underplating  
over all

OVERVIEW

2.7

17/8  
2.54  
0.8

缺口

3

U54 PCB板邊

卷之三

一面)

LESS UNLESS OTHERWISE  
SPECIFIED TOLERANCE

KLS Electronic Co.,Ltd

SATA 7+15

APPROVED / / FILE NAME:  
SIZE A4 REV A PROD NO.

7  
8  
9

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

G

G

G

G

1.MATERIAL:  
Housing: LCP UL 94V-0  
Color: Black  
Contact: Phosphor bronze  
Peg: Brass

F

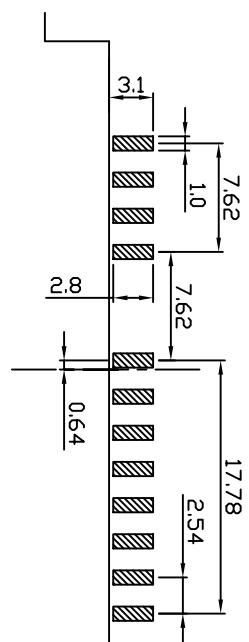
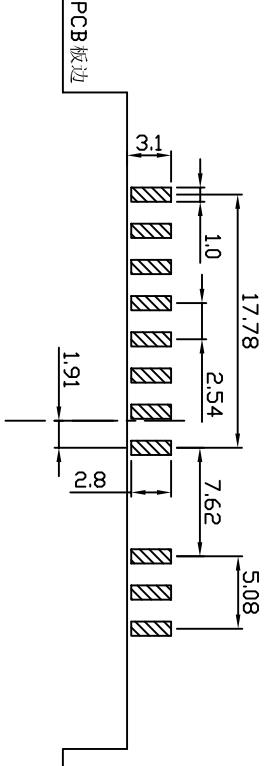
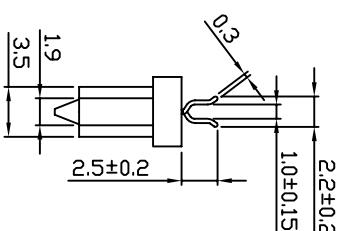
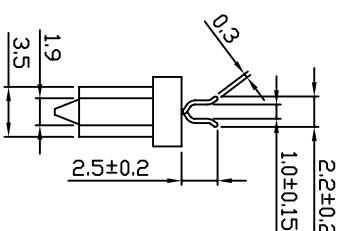
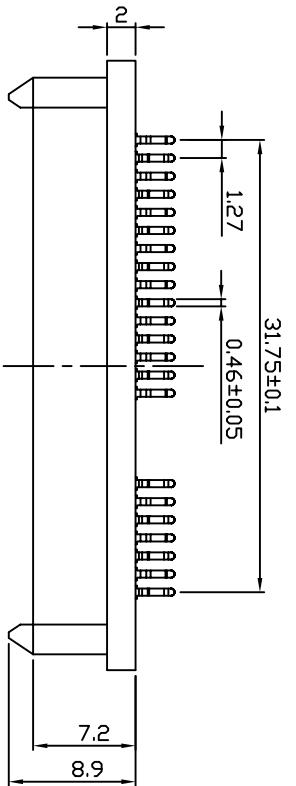
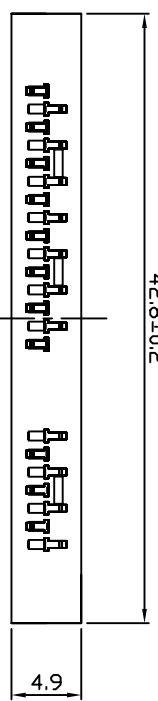
F

2.FINISH:  
Contact: 3u" Gold/Tin plating on contact  
area  
on soldertails 100u" min.Tin-Lead Plating  
over all 50u" min.Nickel underplating  
PEG: 100u" min.Tin-Lead plating on  
soldertails 50u" min.Nickel underplating  
over all

E

E

3. DIMENSION:



(A)

## PCB LAYOUT

(B)

SPECIFIED TOLERANCE		UNLESS OTHERWISE
SCALE	ANGLE	UNIT: mm
DRAWN	0° 0.00 ±0.05	1:1 BEI LIN
CHECKED	18/09/08	DRAWN NAME SATA 7+15

KLS Electronic CO.,LTD

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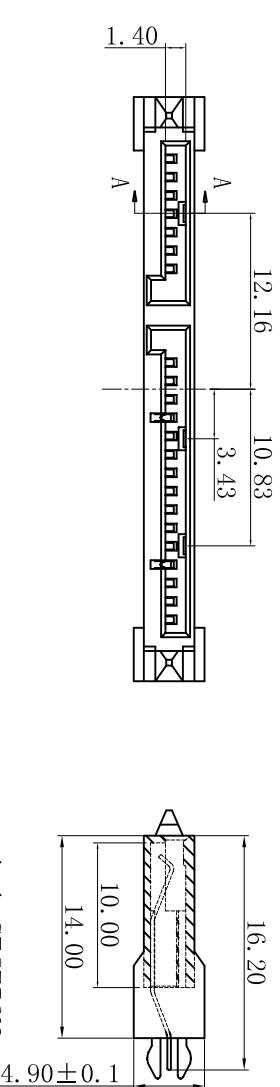
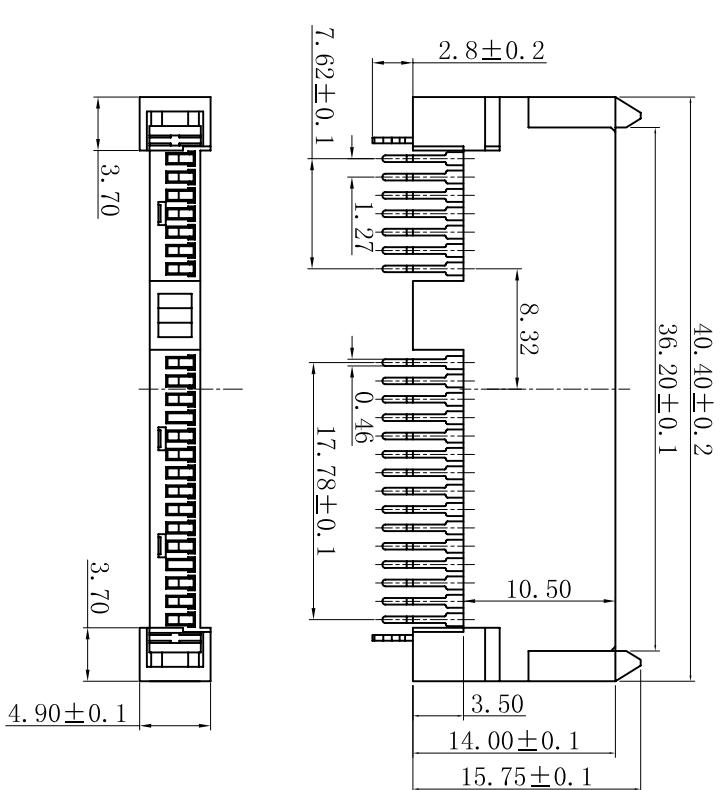
卷之三

## SPECIFICATIONS

B

SCALE	DRAWN	1:1 BEI LIN	07/03/09	UNIT: mm	DRAWN NAME: Pin header 2.0mm
					<b>KLS Electronic co.,LTD</b>

PCB LAYOUT



## A-A SECTION

on solder tails

Contact: 3U Gold/lin plating on contact area

Contact: 3U Gold/In plating on contact area

2.FINISH:

2.FINISH:  
DRAFT  
by: D. Goss

Contact: Phosphor  
Peg: Brass

Contact: Phosphor bronze  
Peg: Brass

Housig: LCP UL 94V-0  
Color: Black

Housig: LCP UL 94V-0  
Color: Black

## 1. MATERIAL

## 1. MATERIAL:

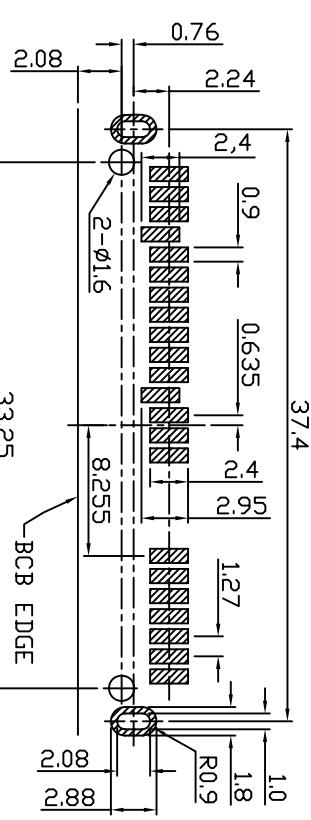
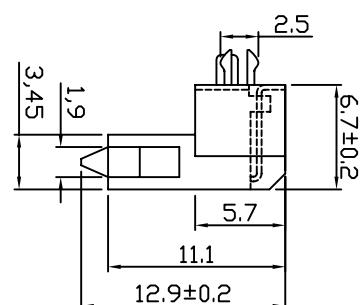
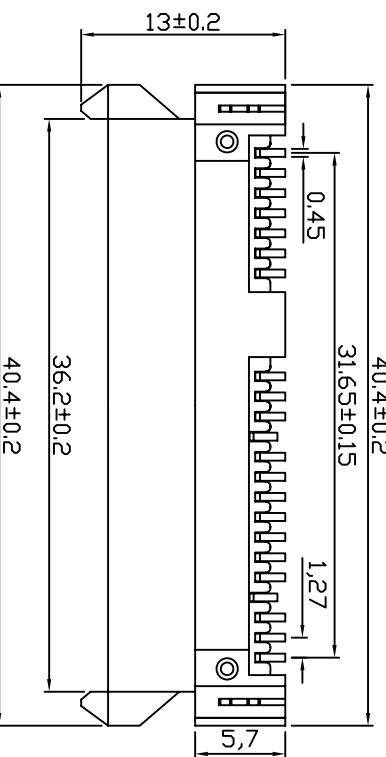
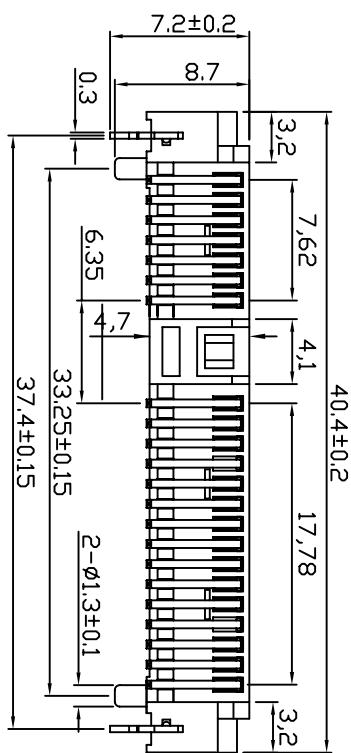
## SPECIFICATIONS

9

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

- 1.MATERIAL:  
Housig: LCP UL 94V-0  
Color: Black  
Contact: Phosphor bronze  
Peg: Brass
- 2.FINISH:  
Contact: 3u" Gold/Tin plating on contact area  
soldertails: 50u" min.Nickel underplating over all  
PEG: 100u" min.Tin-Lead plating on soldertails  
50u" min.Nickel underplating over all



RECOMMEND PCB LAYOUT(T=1.2)  
PCB TOLERANCE: ± 0.05

UNLESS OTHERWISE  
SPECIFIED TOLERANCE  
ANG  $\pm 5^\circ$   
0.0  $\pm 0.3$   
0.00  $\pm 0.2$   
0.05  $\pm 0.05$

KLS Electronic CO.,LTD

SCALE UNIT: mm

DRAWN BY: LI BEI LIN CHECKED BY:

APPROVED BY: / /

SIZE A4 REV A

FILE NAME: A

B

B

C

C

D

D

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1      2      3      4      5      6      7      8      9

G

## SPECIFICATIONS

### 1. MATERIAL:

Housig:

LCP UL 94V-0

Color:

Black

Contact:

Phosphor bronze

Peg:

Brass

### 2. FINISH:

Contact: 3<sup>u</sup>" Gold/Tin plating on contact area  
100<sup>u</sup>" min.Tin-Lead Plating on

### soldertails

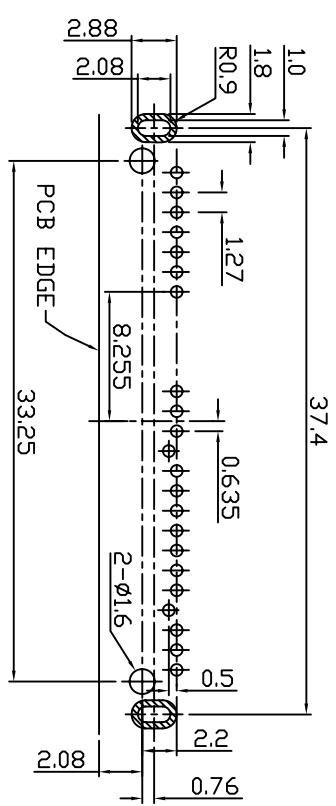
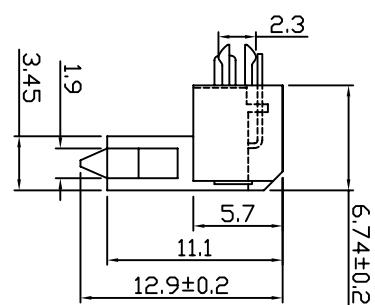
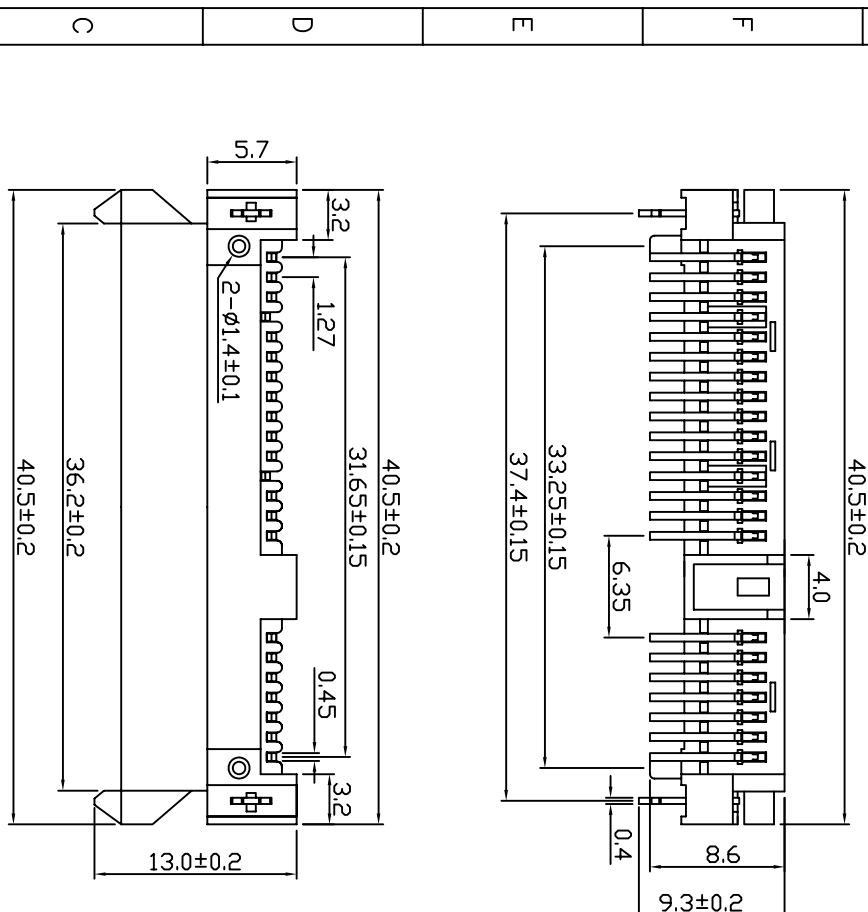
50<sup>u</sup>" min.Nickel underplating over

all

PEG: 100<sup>u</sup>" min.Tin-Lead plating on

soldertails 50<sup>u</sup>" min.Nickel underplating over

all



RECOMMEND PCB LAYOUT (T=1, 2)  
PCB TOLERANCE: ± 0.05

UNLESS OTHERWISE SPECIFIED TOLERANCE	ANG $\pm 5^\circ$	0.00 $\pm 0.3$	0.00 $\pm 0.2$	0.00 $\pm 0.05$
<b>KLS Electronic CO.,LTD</b>				

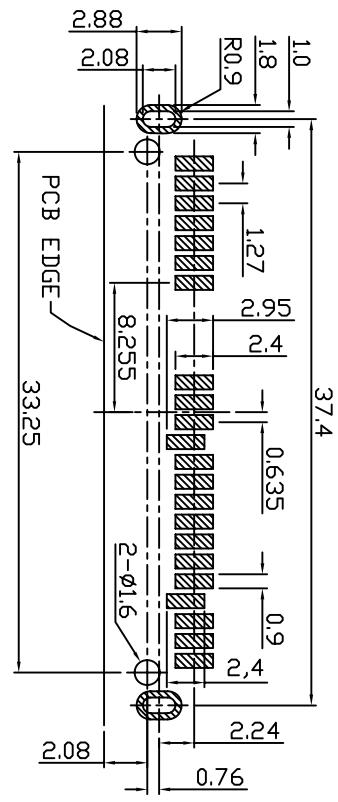
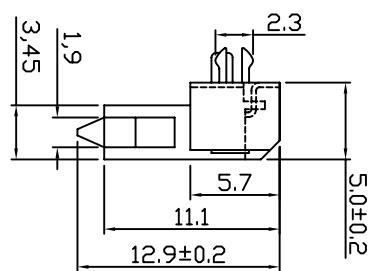
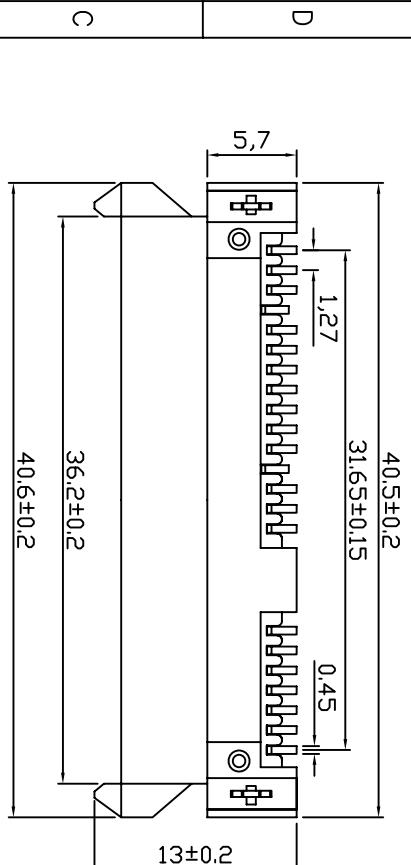
A	SATA 7+15 90° H6.74 板下	1	2	3	4	5	6	7	8	9
B	DRAWN LI BEI LIN CHECKED APPROVED	24/03/09	REVISIONS NAME	PRODUCT NO.	FILE NAME:					

→ 12 13 14 15 16 17 18 19 20

## SPECIFICATIONS

Diagram illustrating the dimensions of a microfluidic device structure:

- Top section dimensions (left to right):  $3.2$ ,  $4.1$ ,  $3.2$ ,  $4.6$ ,  $6.35$ ,  $3.2$ ,  $0.4$ ,  $6.8$ ,  $7.1 \pm 0.2$ .
- Bottom section dimensions (left to right):  $2 - \varnothing 1.35 \pm 0.1$ ,  $33.25 \pm 0.15$ ,  $37.4 \pm 0.15$ .



**RECOMMEND PCB LAYOUT(T=1.2)**

---

**PCB TOLERANCE:  $\pm 0.05$**

		UNLESS OTHERWISE SPECIFIED TOLERANCE		KLS Electronic Co.,LTD	
ANG		$\pm 5^\circ$			
0		$\pm 0.3^\circ$			
0.00		$\pm 0.05^\circ$			
SCALE		UNIT: mm		DRAWN NAME:	
DRAWN		LI BEI LIN		07/21/07	
CHECKED					
APPROVED		/ /		PRODUCT NO.	
		SIZE A4 REV A		FILE NAME:	

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

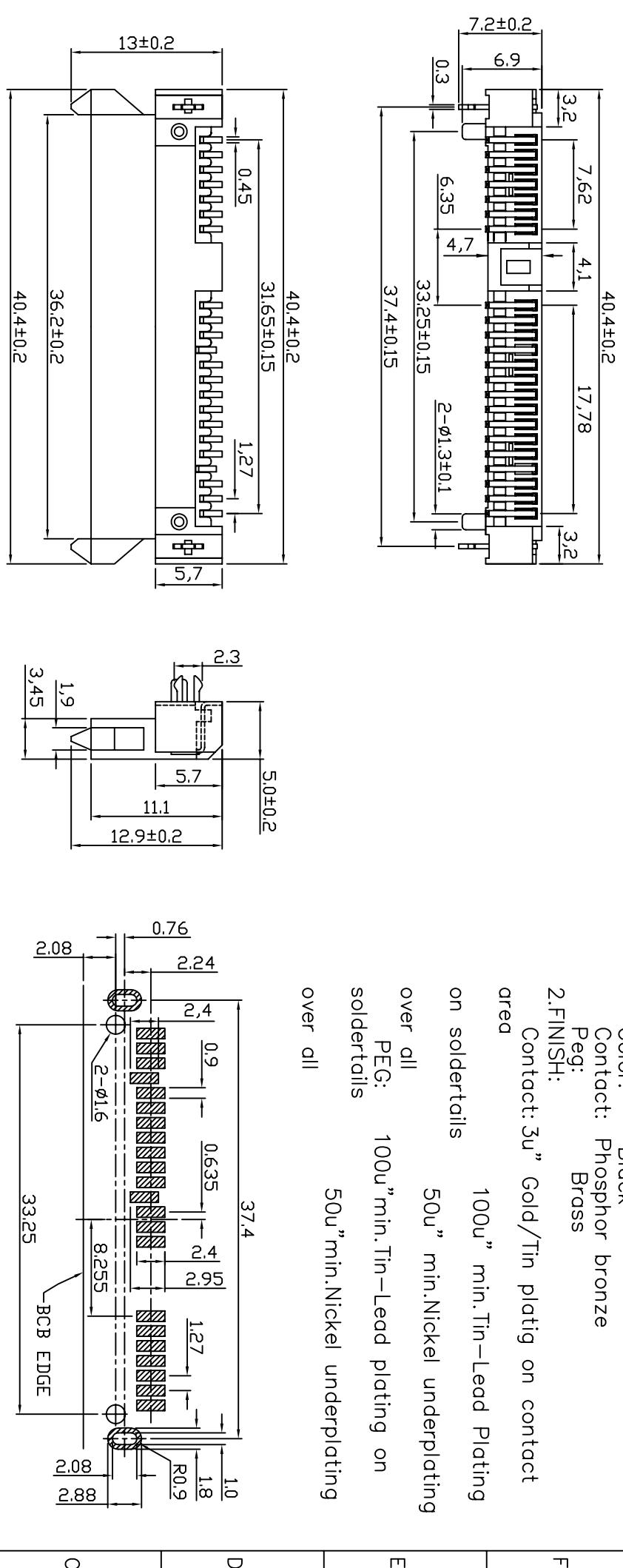
### 2. FINISH:

Contact: 3u" Gold/Tin plating on contact area

on soldertails 50u" min. Tin-Lead underplating

over all PEG: 100u" min. Tin-Lead plating on soldertails

50u" min. Nickel underplating over all



RECOMMEND PCB LAYOUT (T=1.2)  
PCB TOLERANCE: ±0.05

KLS Electronic CO.,LTD

SPECIFIED TOLERANCE UNLESS OTHERWISE ANG	±5° 0.00 ±0.05
SCALE	UNIT: mm

DRAWN LI BEI LIN 07/21/07 DRAWN NAME

CHECKED APPROVED

PRODUCT NO.

FILE NAME:

A

SATA 7+15P H5.0 SMT 板上 带鱼叉

1      2      3      4      5      6      7      8      9





→ 12 13 14 15 16 17 18 19 20

## SPECIFICATIONS

**SPECIFICATIONS**

**1.MATERIAL:**  
Housig: LCP UL 94V-0  
Color: Black  
Contact: Phosphor bronze  
Peg: Brass

**2.FINISH:**  
Contact: 3u" Gold/Tin plating on contact area  
on soldertails 50u" min.Nickel underplating  
over all 100u" min.Tin-Lead Plating  
soldertails 50u" min.Nickel underplating  
over all

**RECOMMEND PCB LAYOUT (T=1.2)**  
PCB TOLERANCE:  $\pm 0.05$

UNLESS SPECIFIED ANG 0 .00	OTHERWISE TOLERANCE $\pm .5^{\circ}$ $\pm .3^{\circ}$ $\pm .2^{\circ}$ $\pm .05^{\circ}$	DRAWN L.I BEI LIN 07/11/08	DRAWN NAME CHECKED	APPROVED / /	SIZE A4 REV A	PRODUCT NO. FILE NAME:		
A	SATA 7+15P H4.2 SMT 板上 不带鱼叉	B	C	D	E	F	G	
1	2	3	4	5	6	7	8	9

Detailed description of the technical drawing:  
 - **Front View (A):** Shows the overall dimensions of the connector. Total width is 40.4±0.2 mm. The central contact area has a width of 31.65±0.15 mm and a height of 13±0.2 mm. The central contact is labeled with a '+' sign above and a '-' sign below. The total height of the central contact area is 4.1 mm. The distance between the central contact and the outer edge is 1.27 mm. The outer shell height is 5.7 mm.  
 - **Top View (B):** Shows the connector from above, highlighting the 7+15 pin arrangement.  
 - **Side View (C):** Shows the connector's profile. The total height is 40.4±0.2 mm. The central contact area is 36.2±0.2 mm wide.  
 - **Cross-Sectional Views (D, E, F, G):**  
 - **View D:** Shows a cross-section of the central contact area. The central contact is 2.24 mm wide and 0.9 mm thick. The central gap is 0.635 mm. The total height of the central contact area is 4.2±0.2 mm.  
 - **View E:** Shows a cross-section of the central contact area with a central peg. The central peg is 2-φ1.3±0.1 mm. The central gap is 0.635 mm. The total height of the central contact area is 6.35 mm.  
 - **View F:** Shows a cross-section of the central contact area with a central peg. The central peg is 2-φ1.3±0.1 mm. The central gap is 0.635 mm. The total height of the central contact area is 6.2 mm.  
 - **View G:** Shows a cross-section of the central contact area with a central peg. The central peg is 2-φ1.3±0.1 mm. The central gap is 0.635 mm. The total height of the central contact area is 3.2 mm.

1      2      3      4      5      6      7      8      9

G

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2.FINISH:

Contact: 3u" Gold/Tin plating on contact

### area

100u" min.Tin-Lead Plating

### on soldertails

50u" min.Nickel underplating

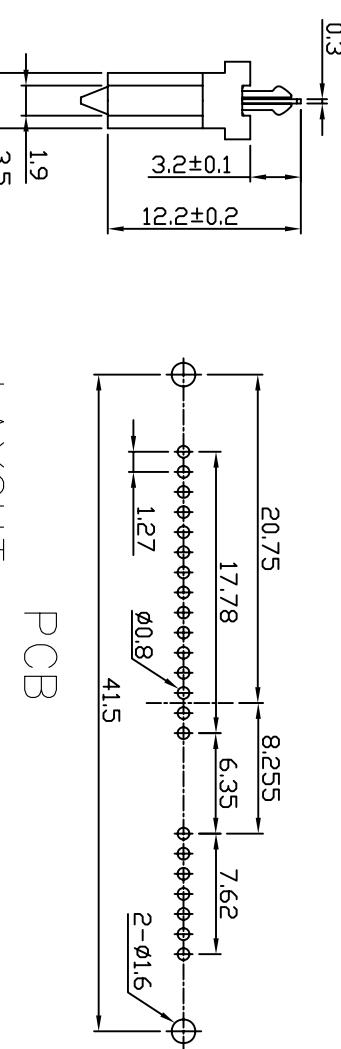
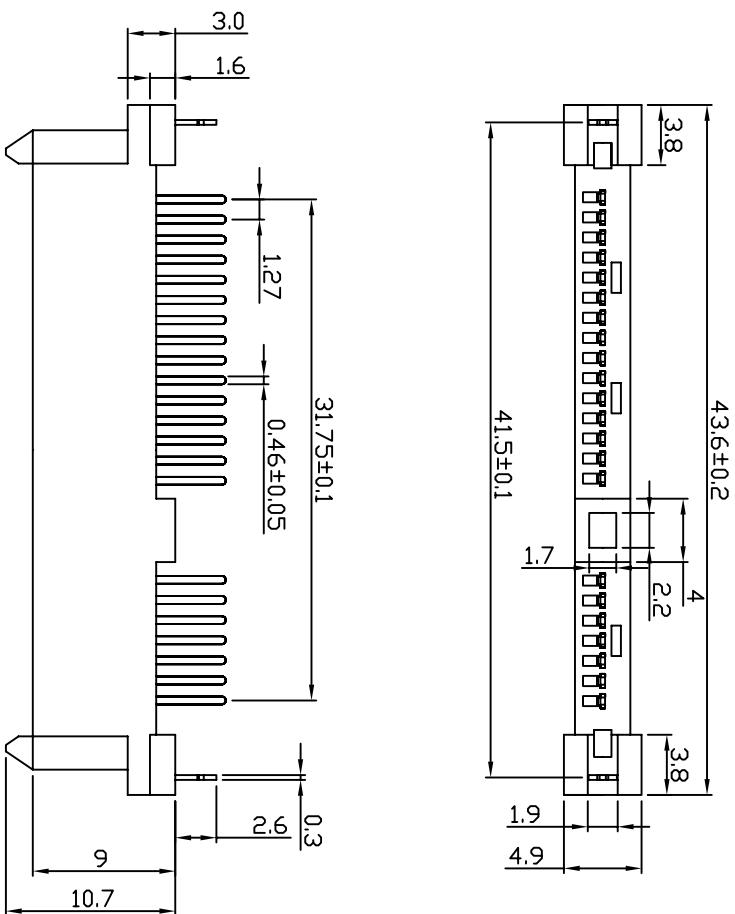
### over all

PEG: 100u"min.Tin-Lead plating on

### soldertails

50u"min.Nickel underplating

### over all



## LAYOUT

## PCB

## PCB LAYOUT

SPECIFIED TOLERANCE UNLESS OTHERWISE ANG		KLS Electronic CO.,LTD
0.00	±0.3 ±0.2 ±0.05	
SCALE	UNIT: mm	DRAWN NAME SATA 7+15
DRAWN L1 BEI LIN	20/12/08	PRODUCT NO. FILE NAME:
CHECKED		
APPROVED	/ /	
	SIZE A4	REV A

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## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2. FINISH:

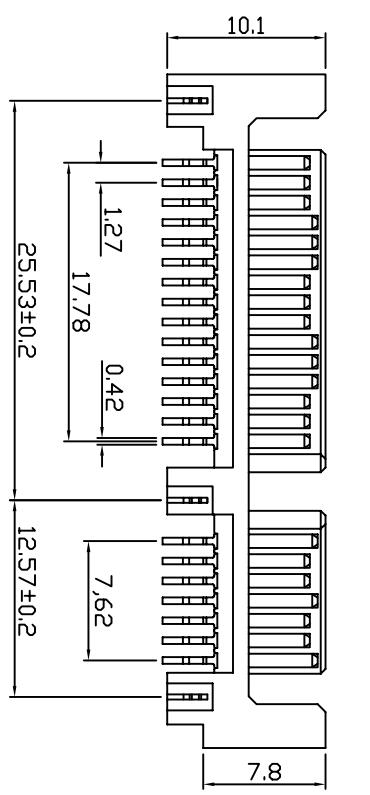
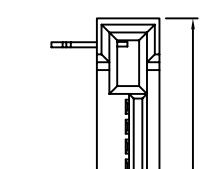
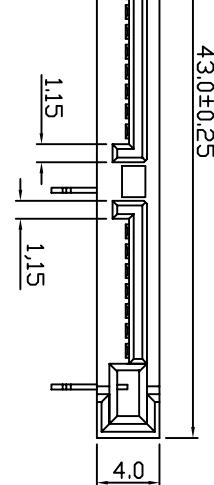
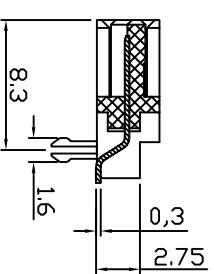
Contact: 3u" Gold/Tin plating on contact area

100u" min. Tin-Lead Plating

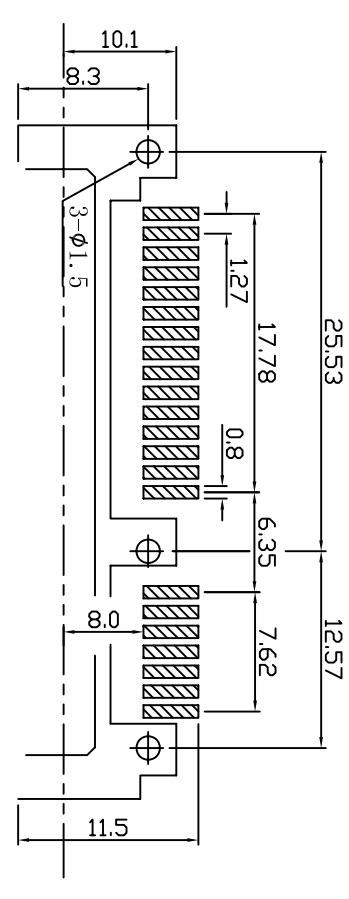
over all 50u" min. Nickel underplating

PEG: 100u" min. Tin-Lead plating on soldertails

50u" min. Nickel underplating over all



RECOMMEND PCB LAYOUT (T=1.2)  
PCB TOLERANCE: ±0.05



**KLS Electronic CO.,LTD**

UNLESS SPECIFIED OTHERWISE	ANGLE ANG 0 0.00	TOLERANCE ±5° ±0.3 ±0.05 ±0.05
----------------------------------	---------------------------	--

SCALE: mm

DRAWN BY BEI LIN CHECKED BY DATE: 31/05/08 DRAWN NAME: SATA 7+15 Pin

APPROVED BY / / PRODUCT NO.

SIZE A4 REV A FILE NAME: A

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

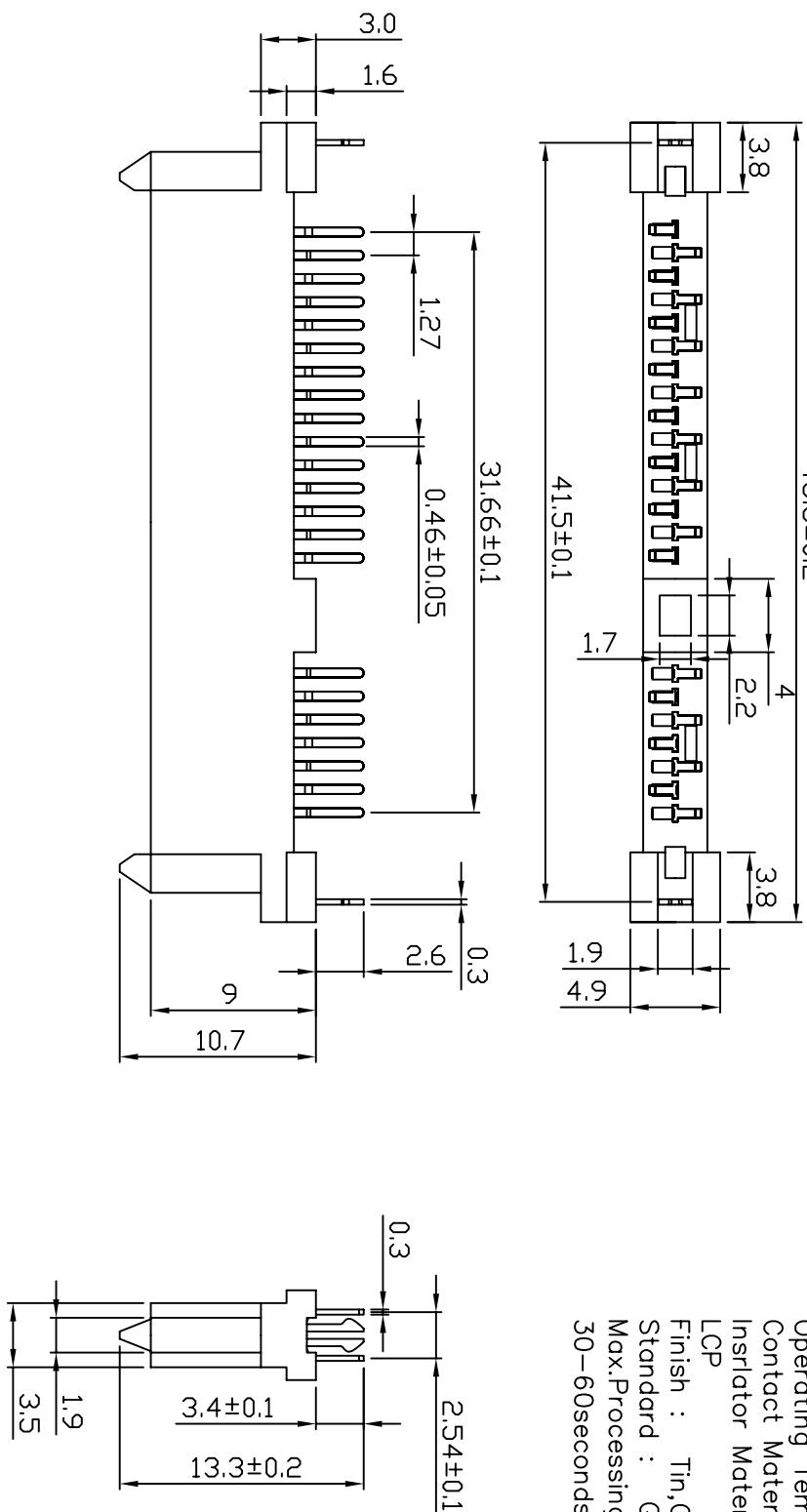
A  
SATA 7+15 公座90° 加鱼叉SMT型

B  
C  
D  
E  
F  
G

1      2      3      4      5      6      7      8      9

### SPECIFICATIONS

Current Rating: 3Amps  
 Insulator Resistance: 5000m $\Omega$  Min  
 Dielectric Withstanding: AC 500V  
 Operating Temperature: -40° to +105°  
 Contact Material: Copper alloy  
 Insulator Material: Polyester, UL 94V-0  
 LCP  
 Finish : Tin,Gold or Duplex plated  
 Standard : Gold flash all over  
 Max.Processing Temp: 230C° for  
 30-60seconds(260C° for 10 seconds)

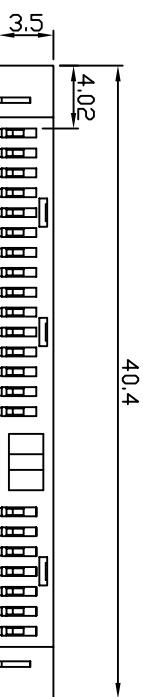


A	B	C	D	E	F	G
SATA 7+15 90° 短端子						
1	2	3	4	5	6	7
8	9					

SCALE	UNLESS OTHERWISE SPECIFIED TOLERANCE	KLS Electronic CO.,LTD
0.00	ANG ±0.3 ±0.05	
0.00	UNIT: mm	
DRAWN BY BEI LIN	07/21/07	DRAWN NAME Pin header 2.0mm
CHECKED		
APPROVED	/ /	PRODUCT NO.
	SIZE A4 REV A	PAGE NAME:
A		

1      2      3      4      5      6      7      8      9

G



## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2. FINISH:

Contact: 3u" Gold/Tin plating on contact area

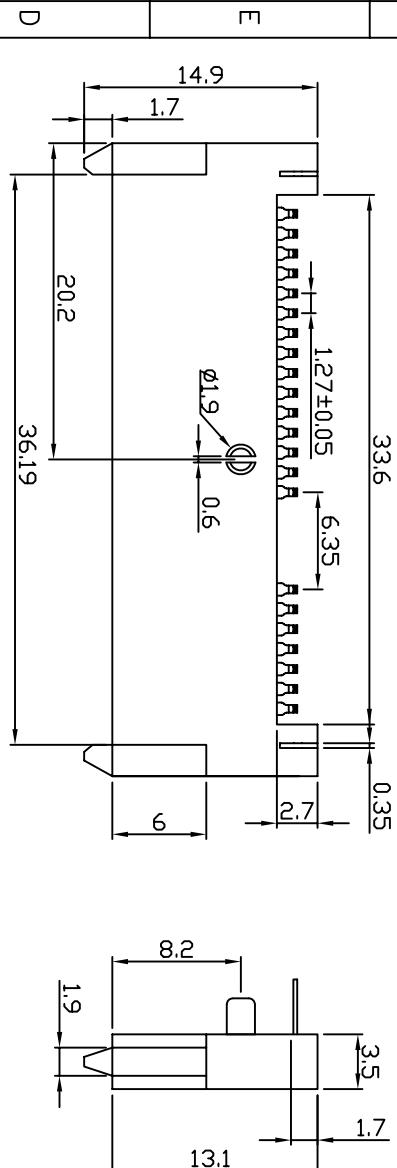
on soldertails 100u" min.Tin-Lead Plating

over all 50u" min.Nickel underplating

PEG: 100u" min.Tin-Lead plating on

soldertails 50u" min.Nickel underplating

over all



D

E

F

G

C

B

## PCB LAYOUT

SPECIFIED TOLERANCE		UNLESS OTHERWISE
ANGLE	ANG	±5°
SCALE	UNIT:	0.00
DRAWN	LI BEI LIN	07/21/07
CHECKED		DRAWN NAME
APPROVED	/ /	SATA 7+15P
	SIZE A4	REV A
		FILE NAME:

KLS Electronic CO., LTD

A

SATA 7+15 90° H3.5 不帶金叉

1      2      3      4      5      6

7      8      9

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1.MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2.FINISH:

Contact: 3u" Gold/Tin plating on contact area

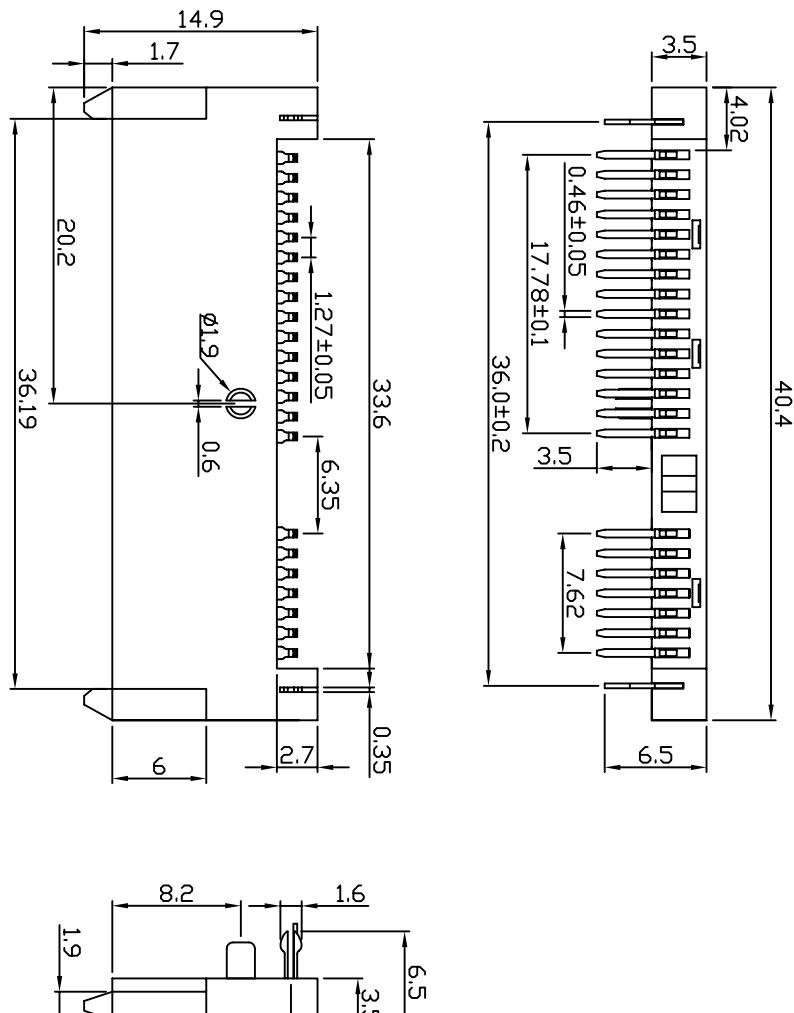
100u" min.Tin-Lead Plating

50u" min.Nickel underplating

over all PEG: 100u"min.Tin-Lead plating on

soldertails 50u"min.Nickel underplating

over all



C

C

D

E

F

G

B

## PCB LAYOUT

KLS Electronic CO.,LTD

SPECIFIED TOLERANCE		UNLESS OTHERWISE	ANGLE ANG 0 0.00 0.00	UNIT: mm	DRAWN NAME: SATA 7+15P
SCALE	DRAWN	CHECKED			
A	SATA 7+15 90° H3.5 带鱼叉				
1	2	3	4	5	6
			7	8	9

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

G

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2.FINISH:

Contact: 3u" Gold/Tin plating  
on contact area

100u"

min.Tin-Lead Plating on  
soldertails

50u" min.Nickel

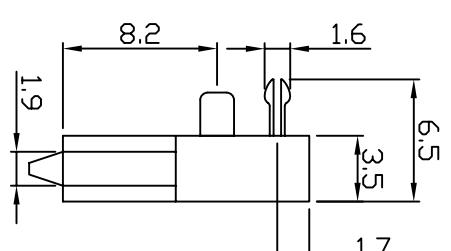
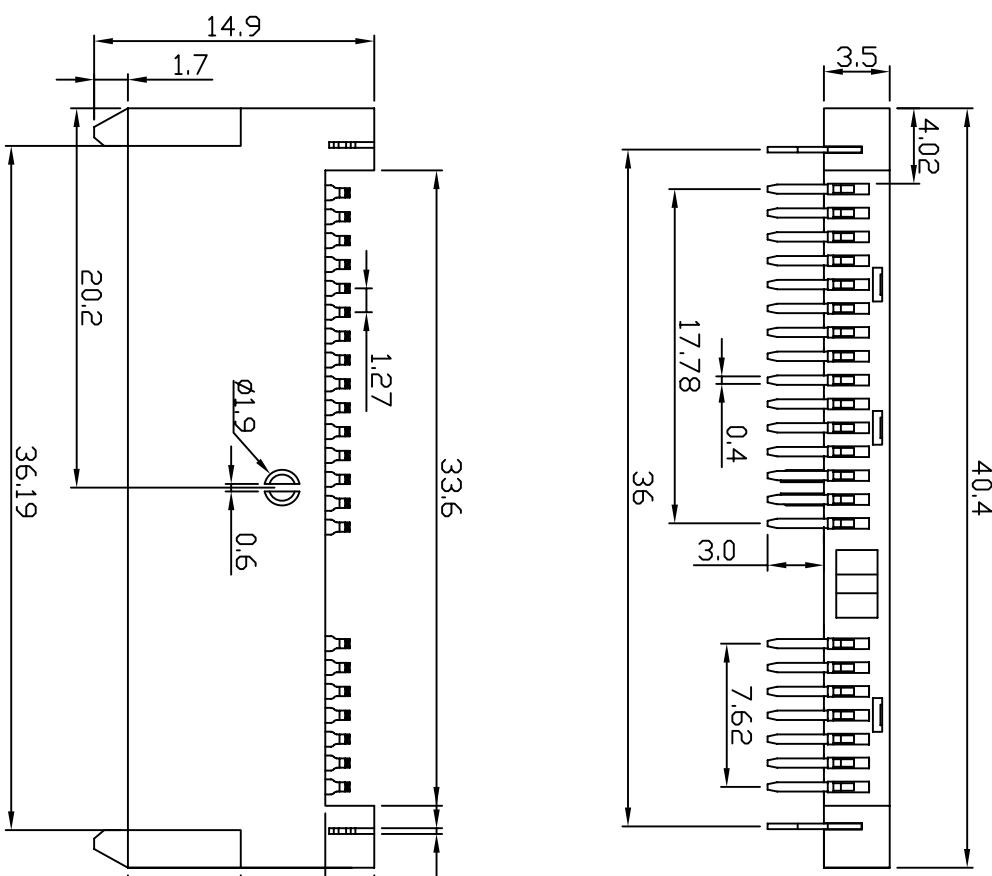
underplating over all

PEG: 100u" min.Tin-Lead

plating on soldertails

50u" min.Nickel

underplating over all



UNLESS OTHERWISE SPECIFIED TOLERANCE		KLS Electronic CO., LTD
ANG	.00	
$\pm 5^\circ$	$\pm 0.3^\circ$	
$\pm 0.2^\circ$	$\pm 0.05^\circ$	
SCALE	UNIT: mm	DRAWN NAME Pin header 2.0mm
DRAWN 李北林	07/21/07	CHECKED
APPROVED	/ /	PRODUCT NO.
	SIZE A4	REV A
1	2	3
4	5	6
7	8	9

B		
C		
D		
E		
F		
G		
A	SATA 7+15 90°	

1      2      3      4      5      6      7      8      9

G

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2. FINISH:

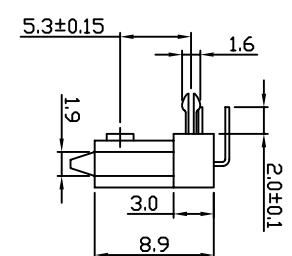
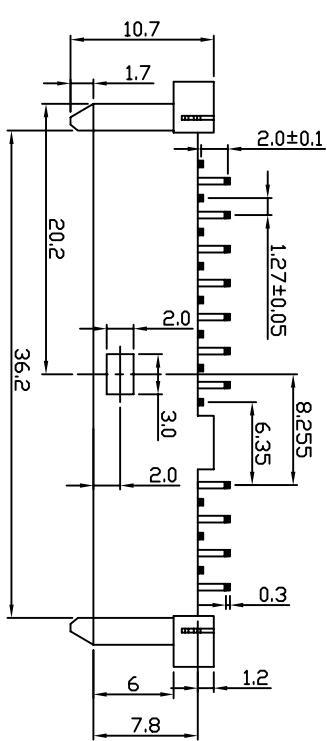
Contact: 3u" Gold/Tin plating on contact area

on soldertails 100u" min. Tin-Lead Plating

over all 50u" min. Nickel underplating

PEG: 100u" min. Tin-Lead plating on soldertails

over all 50u" min. Nickel underplating



## PCB LAYOUT

KLS Electronic CO.,LTD

UNLESS OTHERWISE SPECIFIED TOLERANCE		ANG 0 0.00 0.00 ±0.05 ±0.3 ±0.02 ±0.05	UNIT: mm

1      2      3      4      5      6      7      8      9

A	SATA 7+15 90° H7.8 中间带凸台	B	C	D	E	F	G
1	2	3	4	5	6	7	8

1      2      3      4      5      6      7      8      9

G

### SPECIFICATIONS

#### 1.MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

#### 2.FINISH:

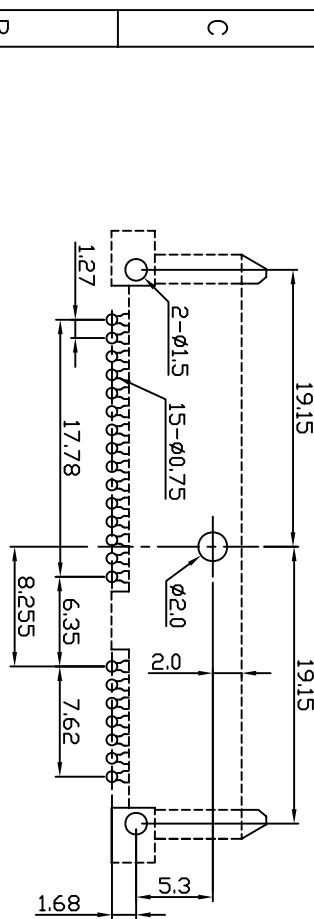
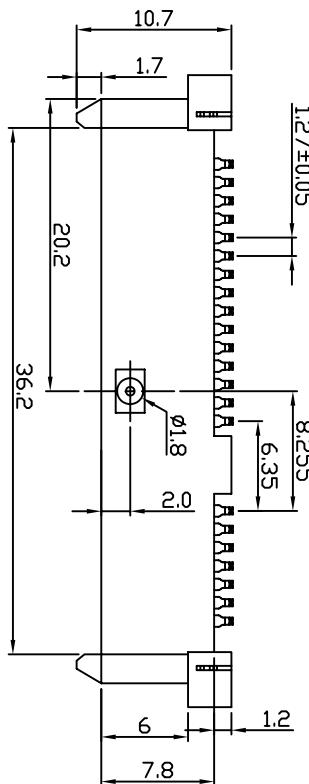
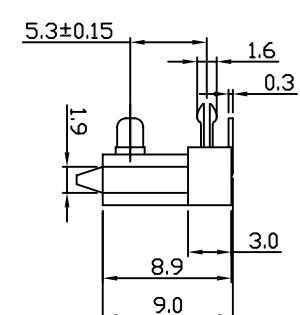
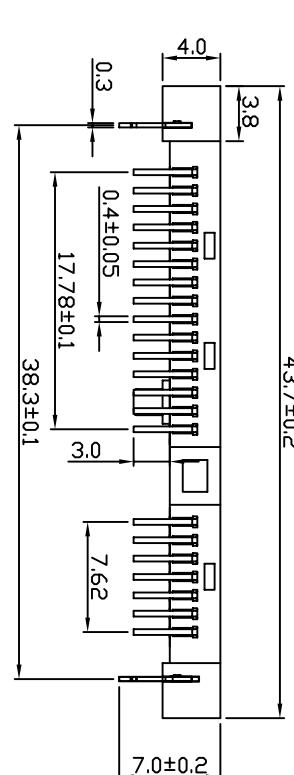
Contact: 3u" Gold/Tin plating on contact area

on soldertails 100u" min.Tin-Lead Plating

over all 50u" min.Nickel underplating

PEG: 100u"min.Tin-Lead plating on soldertails

over all 50u"min.Nickel underplating



### PCB LAYOUT

KLS Electronic CO.,LTD

UNLESS OTHERWISE SPECIFIED TOLERANCE		UNIT: mm
ANG	±5°	
0	±0.3	
0.00	±0.2	
	±0.05	

A	SATA 7+15 90° H4.0 中间带柱	REVA	FILE NAME:
1	2	3	4
5	6	7	8
			9

B

C

D

E

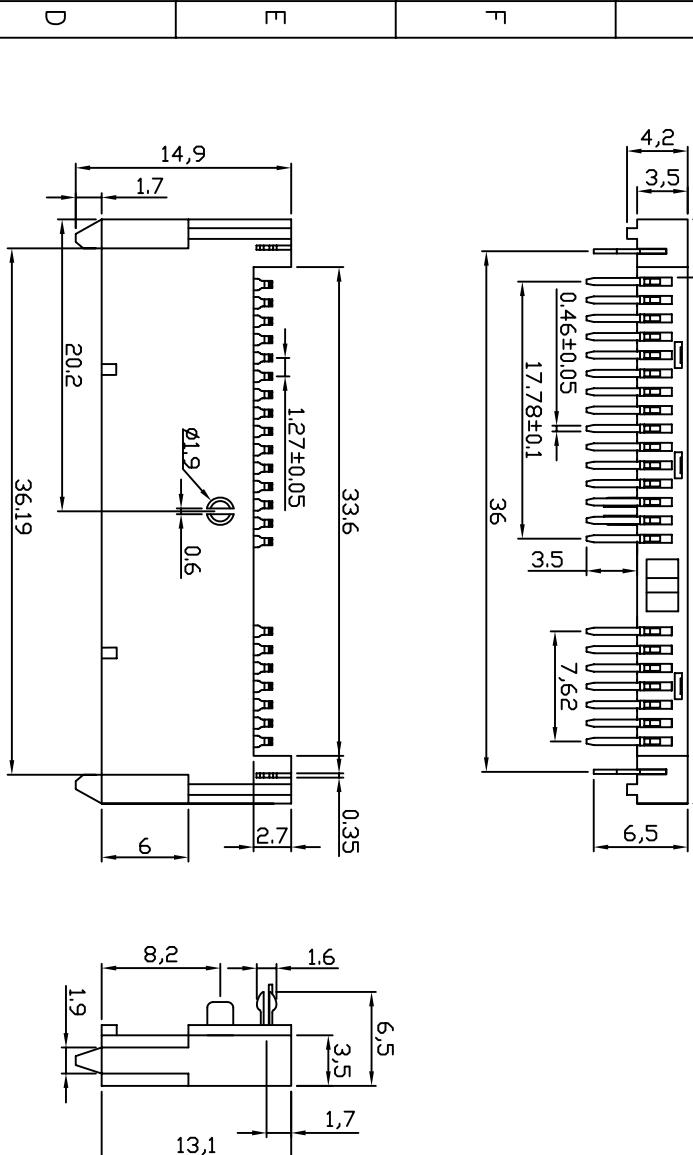
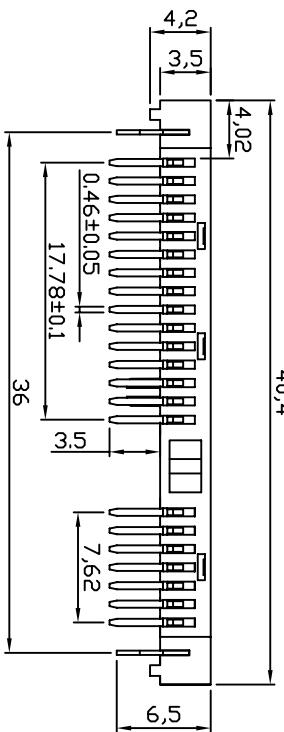
F

G

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

G



1.MATERIAL:  
Housig: LCP UL 94V-0  
Color: Black  
Contact: Phosphor bronze  
Peg: Brass

### 2.FINISH:

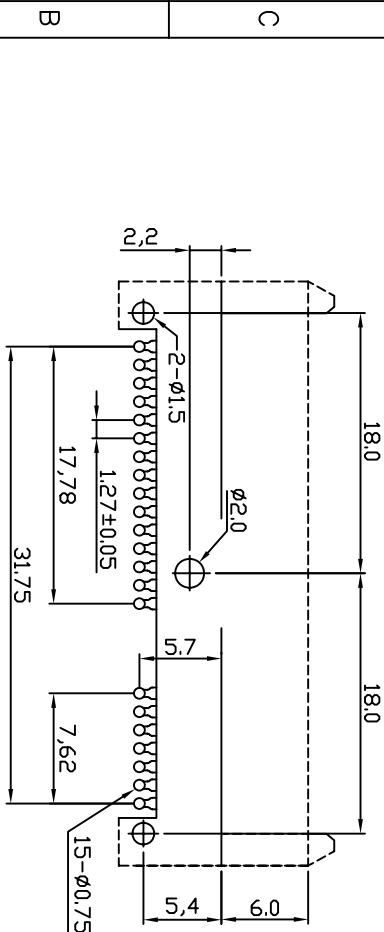
Contact: 3u" Gold/Tin plating on contact area

on soldertails 100u" min.Tin-Lead Plating

over all 50u" min.Nickel underplating

PEG: 100u"min.Tin-Lead plating on soldertails

over all 50u"min.Nickel underplating



## RECOMMEND PCB LAYOUT

SPECIFIED TOLERANCE		UNLESS OTHERWISE
ANGLE	ANG	ANG
0	0	±5°
0.00	0.00	±0.3
		±0.2
		±0.05

KLS Electronic CO.,LTD

A	B	C	D	E	F	G
SATA 7+15 90° 板下						
1	2	3	4	5	6	7

8      9

A

1      2      3      4      5      6      7      8      9

## SPECIFICATIONS

### 1.MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2.FINISH:

Contact: 3u" Gold/Tin plating on contact area

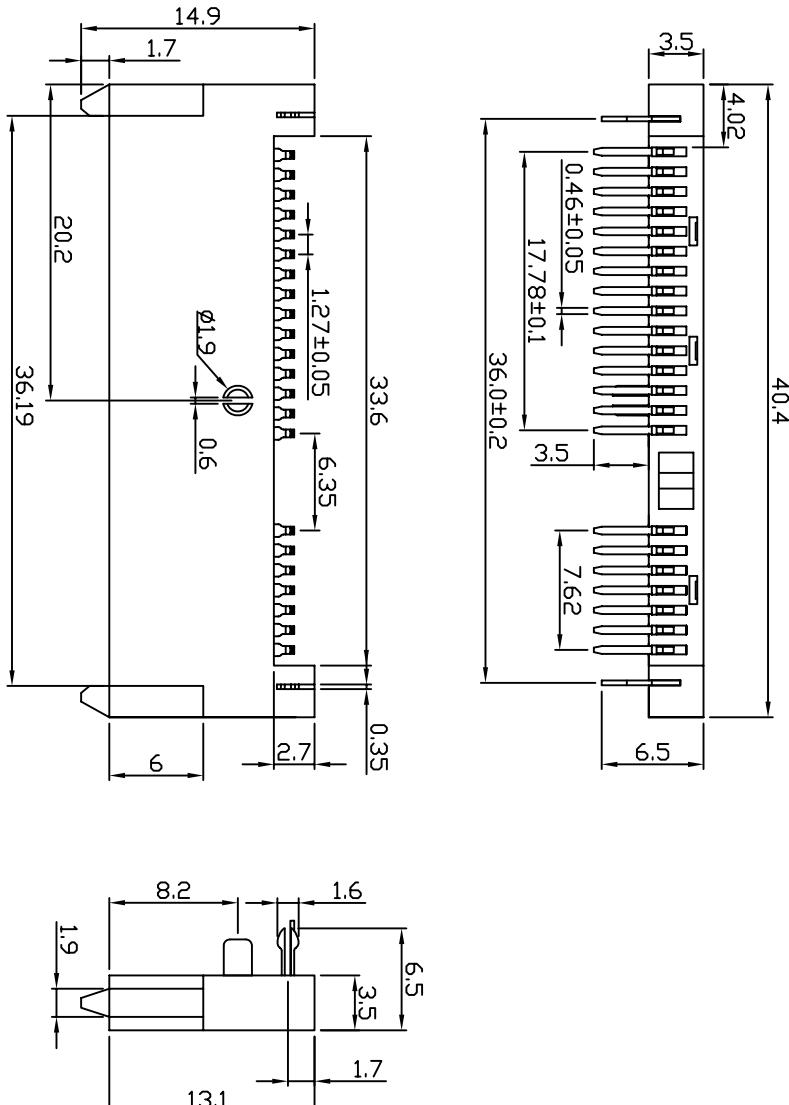
100u" min.Tin-Lead Plating

50u" min.Nickel underplating

over all PEG: 100u"min.Tin-Lead plating on

50u"min.Nickel underplating

over all



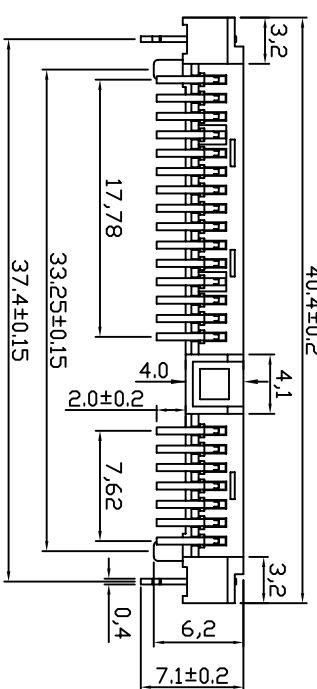
## PCB LAYOUT

KLS Electronic CO.,LTD

SPECIFIED TOLERANCE		UNLESS OTHERWISE		DRAWN BY	CHECKED BY	APPROVED BY	SCALE		UNIT:		DRAWN NAME	CHECKED NAME	APPROVED NAME
ANG	ANG	±5°	±0.3				0.00	0.00	0.00	0.00			
				LI BEI LIN	07/21/07		/	/			SATA 7+15P		
												PILE NAME:	
1	2	3	4	5	6	7	8	9					A

1      2      3      4      5      6      7      8      9

**G**



**SPECIFICATIONS**

**1. MATERIAL:**

Housig: LCP UL 94V-0

Color: Black

Contact:

Phosphor bronze

Peg:

Brass

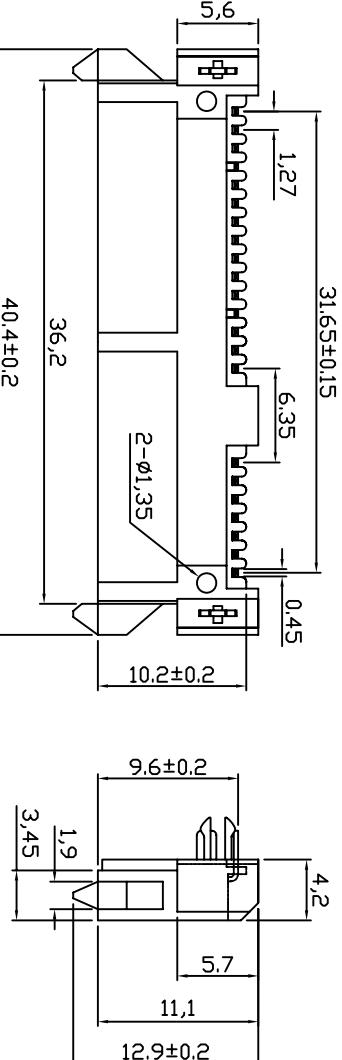
**2. FINISH:**

Contact: 3 $\mu$ " Gold/Tin plating on contact area

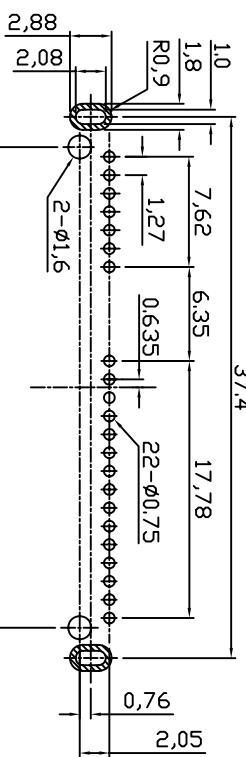
on soldertails 50 $\mu$ " min. Nickel underplating

over all 100 $\mu$ " min. Tin-Lead plating on soldertails

over all 50 $\mu$ " min. Nickel underplating



**C**



**B**

RECOMMEND PCB LAYOUT (t=1.2)

PCB TOLERANCE:  $\pm 0.05$

**KLS Electronic Co.,LTD**

UNLESS OTHERWISE SPECIFIED TOLERANCE	
ANG	±5°
0°	±0.3
0.00	±0.2
0.00	±0.05

SCALE

1:1

LINEAR

UNIT:

mm

DRAWN

BY

L1

BLW

LIN

06/09/08

DRAWN NAME

Pin header

2.0mm

CHECKED

APPROVED

/

/

PRODUCT NO.

PILE NAME:

A

1

2

3

4

5

6

7

8

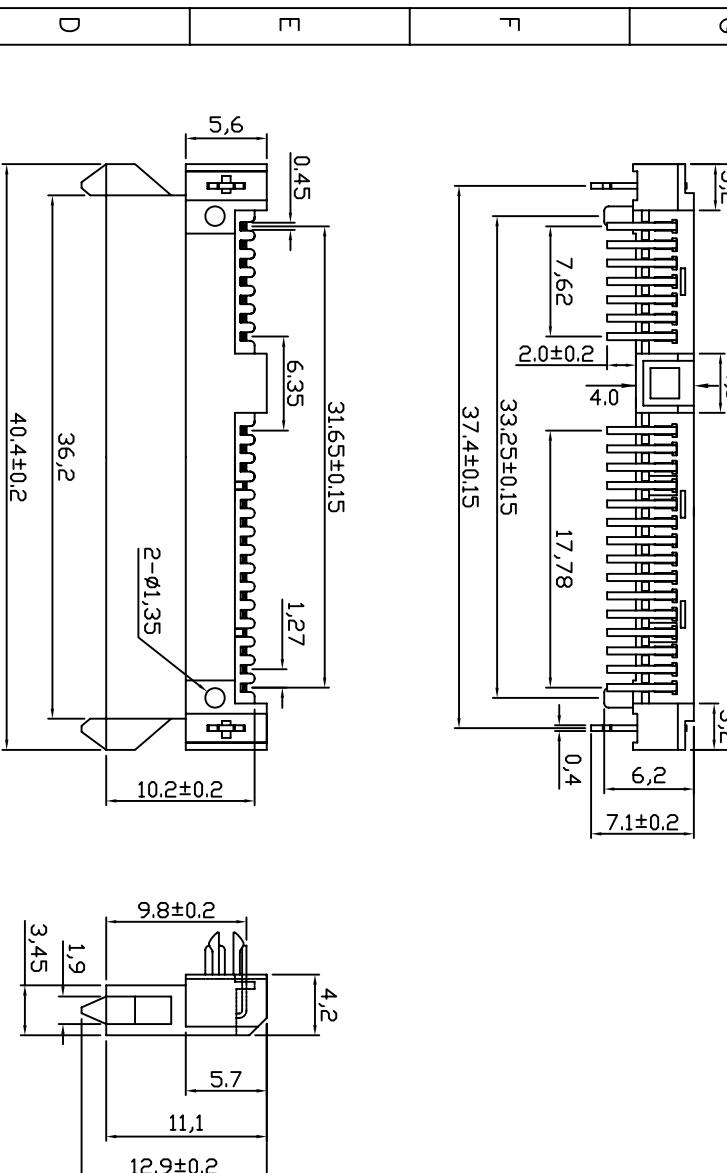
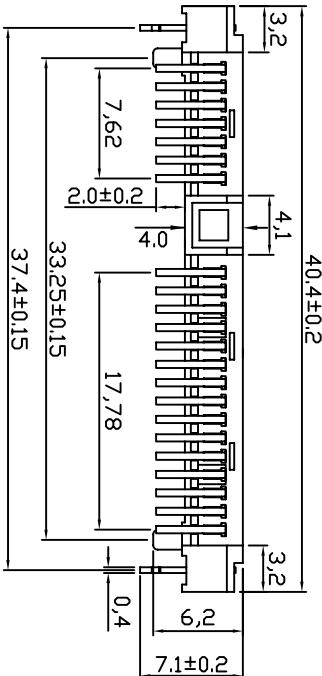
9

**A**

SATA 7+15 90° H4.2 板下 带三孔

1      2      3      4      5      6      7      8      9

G



## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

### 2. FINISH:

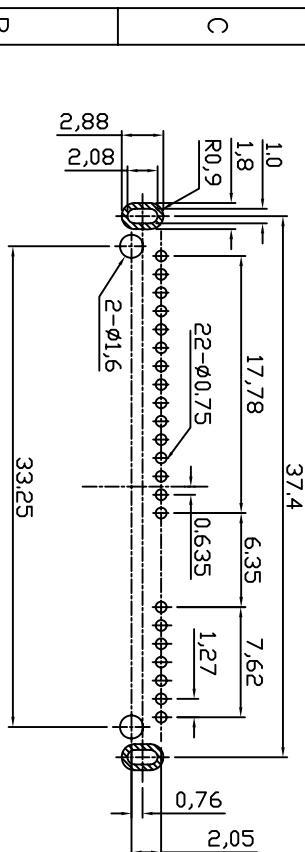
Contact: 3u" Gold/Tin plating on contact area

on soldertails 100u" min. Tin-Lead Plating

over all 50u" min. Nickel underplating

PEG: 100u" min. Tin-Lead plating on soldertails

over all 50u" min. Nickel underplating



RECOMMEND PCB LAYOUT (T=1.2)

PCB TOLERANCE: ± 0. 05

KLS Electronic CO.,LTD

A	SATA 7+15 90° H4.2 板上	1	2	3	4	5	6	7	8	9
---	-----------------------	---	---	---	---	---	---	---	---	---

SCALE	UNIT:	DRAWN BY	CHECKED BY	DRAWN NAME
0.00	mm	L1 BEI LIN	06/09/08	Pin header 2.0mm
APPROVED	/ /			PRODUCT NO.

B      C      D      E      F      G

1      2      3      4      5      6      7      8      9

G

G

## SPECIFICATIONS

### 1. MATERIAL:

Housig: LCP UL 94V-0  
Color: Black

Contact: Phosphor bronze  
Peg: Brass

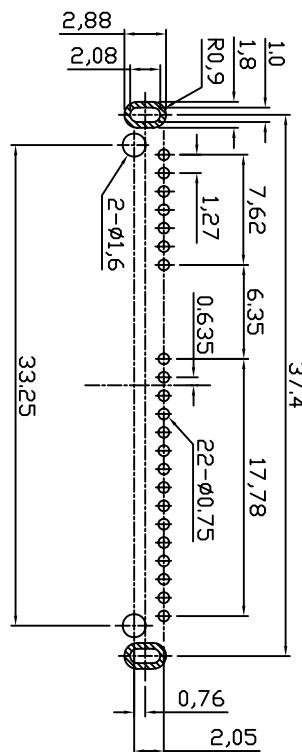
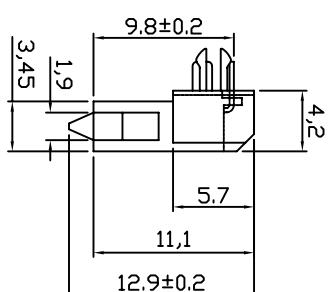
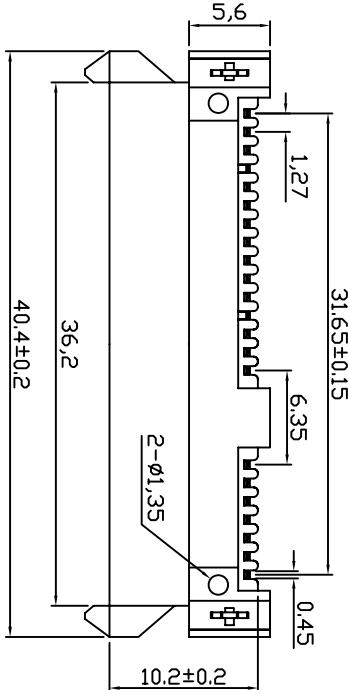
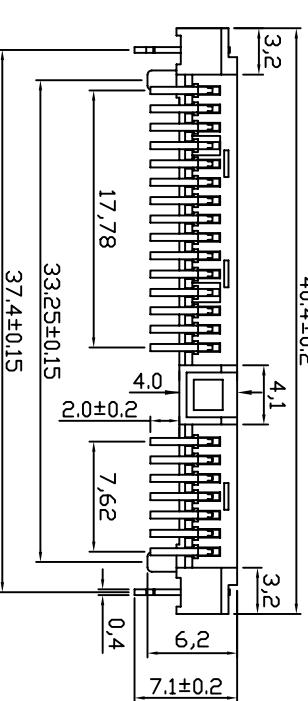
### 2. FINISH:

Contact: 3u" Gold/Tin plating on contact area

on soldertails 50u" min. Nickel underplating

over all PEG: 100u"min. Tin-Lead plating on soldertails

over all 50u"min. Nickel underplating



RECOMMEND PCB LAYOUT ( $\gamma=1.2$ )

PCB TOLERANCE:  $\pm 0.05$

KLS Electronic CO.,LTD

UNLESS OTHERWISE  
SPECIFIED TOLERANCE  
ANG  
0.0  
0.00  
 $\pm 0.3$   
 $\pm 0.2$   
 $\pm 0.05$

SCALE  
DRAWN  
CHECKED  
APPROVED

UNIT:  
mm

DRAWN NAME:  
L1 BEL LIN  
Pin header 2.0mm

CHECKED  
APPROVED

PRODUCT NO.  
REV A  
FILE NAME:

A

B

C

D

E

F

G

1      2      3      4      5      6      7      8      9

A	SATA	7+15	90°	H4.2	板下									
						1	2	3	4	5	6	7	8	9

1 2 3 4 5 6 7 8 9

## SPECIFICATIONS

### 1.MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

Peg: Brass

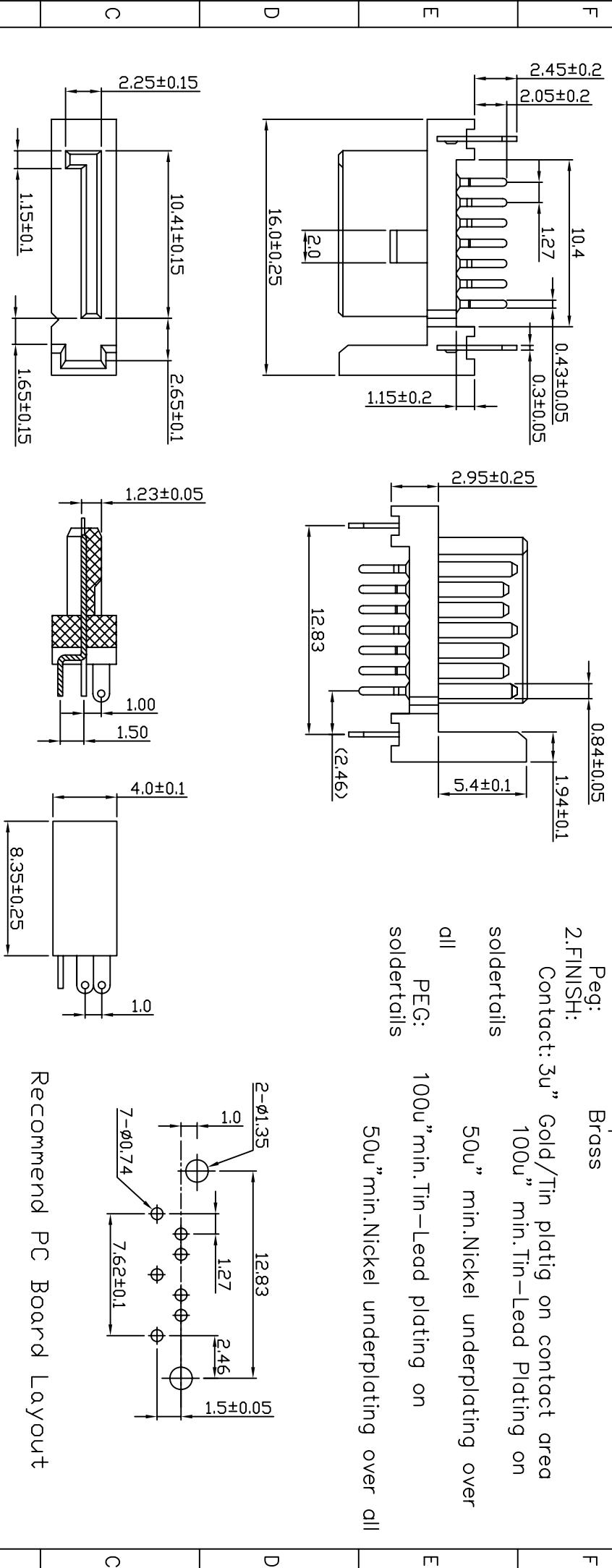
### 2.FINISH:

Contact: 3u" Gold/Tin plating on contact area  
100u" min.Tin-Lead Plating on

soldertails 50u" min.Nickel underplating over

PEG: 100u"min.Tin-Lead plating on  
soldertails

50u"min.Nickel underplating over all



UNLESS OTHERWISE SPECIFIED TOLERANCE		KLS Electronic CO.,LTD
ANGLE	DRAWN BY	
0°	李北林	DRAWN NAME
.00	17/06/08	SATA 7P B TYPE
UNIT: mm		PRODUCT NO.
SCALE		FILE NAME:
DRAWN		A
CHECKED		
APPROVED	/ /	
	SIZE A4	REV A

1 2 3 4 5 6 7 8 9

## SPECIFICATIONS

### 1.MATERIAL:

Housig: LCP UL 94V-0  
Color: Black

Contact: Phosphor bronze  
Peg: Brass

### 2.FINISH:

Contact: 3u" Gold/Tin plating on contact

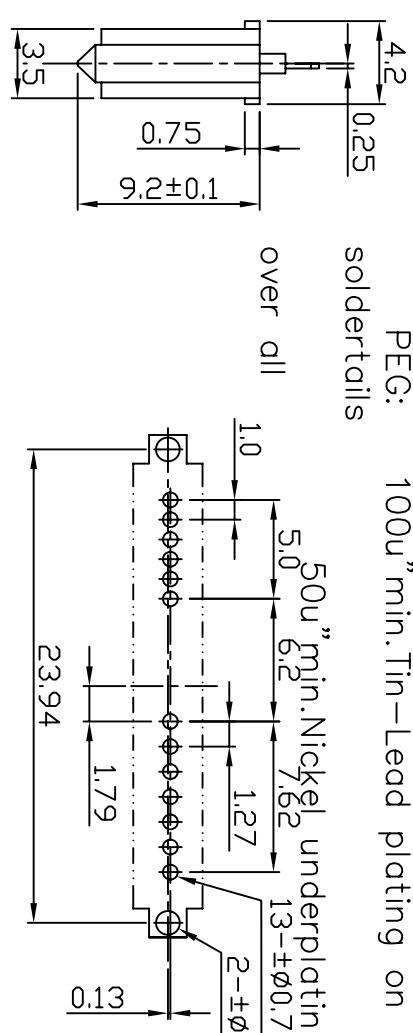
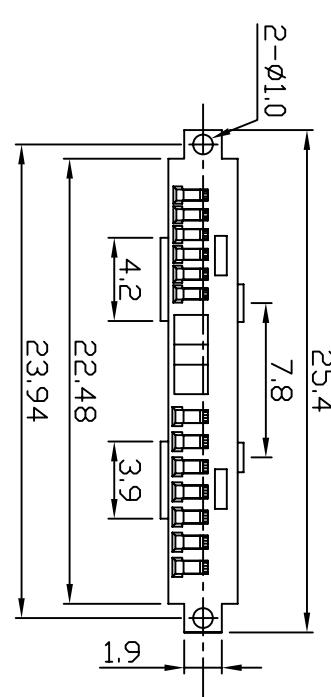
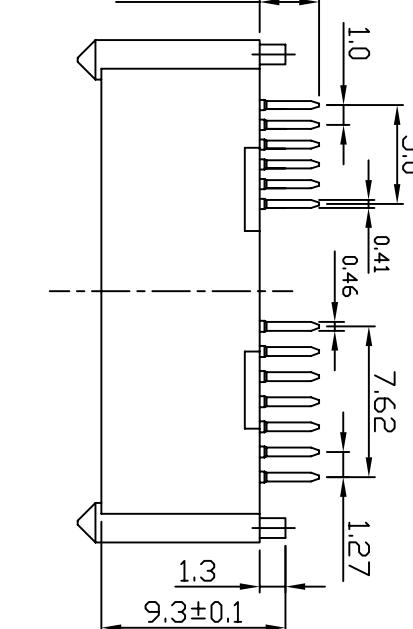
area

100u" min.Tin-Lead Plating

50u" min.Nickel underplating

over all  
PEG: 100u" min.Tin-Lead plating on

soldertails  
over all  
PEG: 100u" min.Tin-Lead plating on



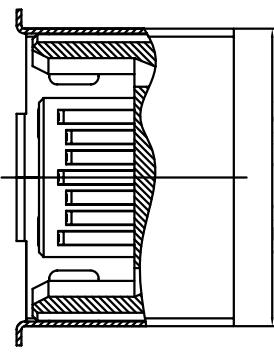
## PCB LAYOUT

SPECIFIED TOLERANCE UNLESS OTHERWISE ANG 0 0.00 ±0.3 ±0.2 ±0.05		KLS Electronic CO.,LTD
SCALE	UNIT: mm	DRAWN NAME SATA 6+7P 180°
DRAWN LI BEI LIN	06/01/09	DRAWN NAME SATA 6+7P 180°
CHECKED		PRODUCT NO.
APPROVED	/ /	FILE NAME: A
	SIZE A4	REV A
1	2	3
4	5	6
7	8	9

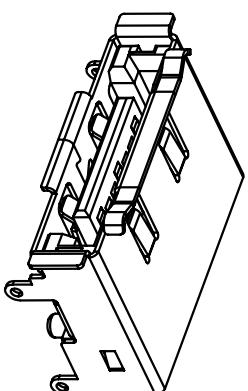
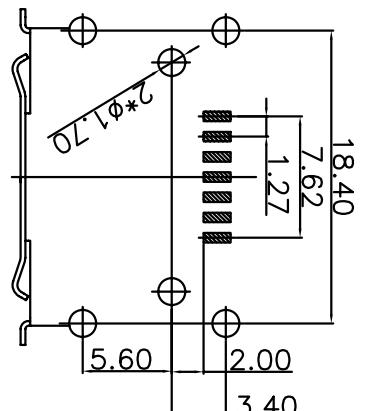
1      2      3      4      5      6      7      8      9

G

$18.70 \pm 0.20$

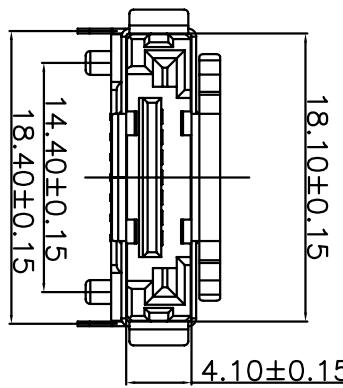


P.C.B layout

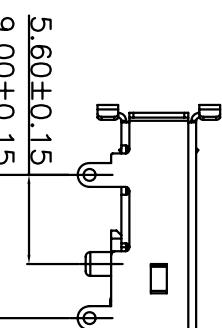


E

$18.10 \pm 0.15$

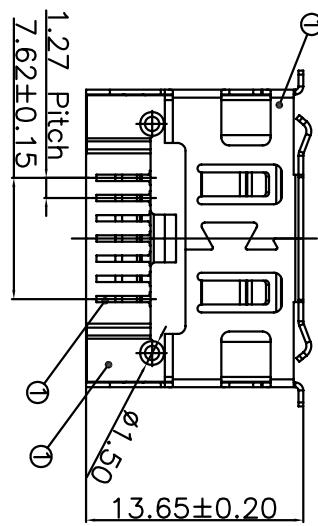


D



SPECIFICATION:  
MATERIAL:  
HOUSING:PA6T 30% GF UL 94V-0  
COLOR:BLACK  
CONTACT:Bronze C5191-H,T=0.25mm  
SHELL:BRASS C2680R-H,T=0.30mm  
FINISH:  
CONTACT:3u"GOLD/TIN PLATING ON CONTACT AREA  
100u"MIN.TIN-LEAD PLATING ON SOLDERTAILS  
50u"MIN.NICKEL UNDERPLATING OVERALL  
PEG:100u"MIN.TIN-LEAD PLATING ON SOLDERTAILS  
50u"MIN.NICKEL UNDERPLATING OVERALL

C



B

UNLESS OTHERWISE  
SPECIFIED TOLERANCE  
ANG  $\pm 0.3^\circ$   
0  $\pm 0.15$   
.00  $\pm 0.05$

SCALE	UNIT	DRAWN NAME
.00	mm	

KLS Electronic Co., LTD

B

C

A

E\_SATA 7P - JEDEC SMT (板上)

1      2      3      4      5      6      7      8      9

F

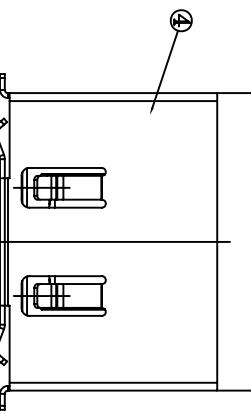
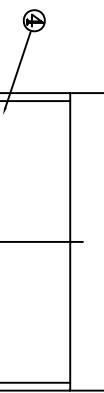
F

G

1      2      3      4      5      6      7      8      9

G

**$18.70 \pm 0.15$**



**SPECIFICATION:**  
**MATERIAL:**

HOUSING: PAST 30% GF UL 94V-0

COLOR: BLACK

CONTACT: Bronze C5191-H, T=0.25mm

SHELL: BRASS C2680R-H, T=0.30mm

FINISH

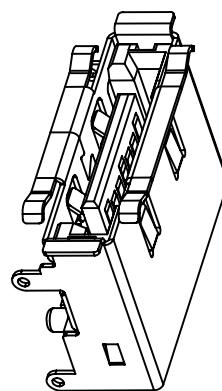
CONTACT: 3μ" GOLD/TIN PLATING ON CONTACT AREA

100μ" MIN. TIN-LEAD PLATING ON SOLDERTAILS

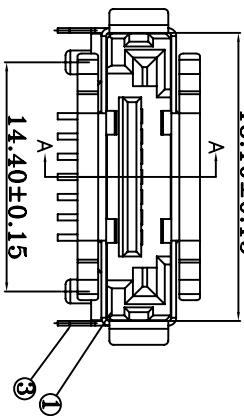
50μ" MIN. NICKEL UNDERPLATING OVERALL

PEG: 100μ" MIN. TIN-LEAD PLATING ON SOLDERTAILS

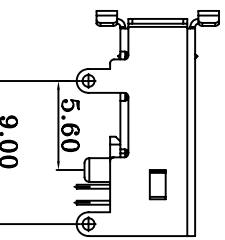
50μ" MIN. NICKEL UNDERPLATING OVERALL



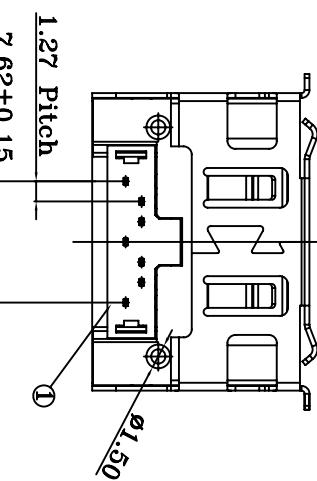
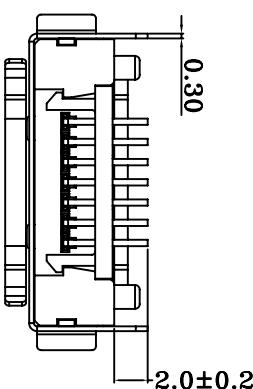
**$18.10 \pm 0.15$**



①



②



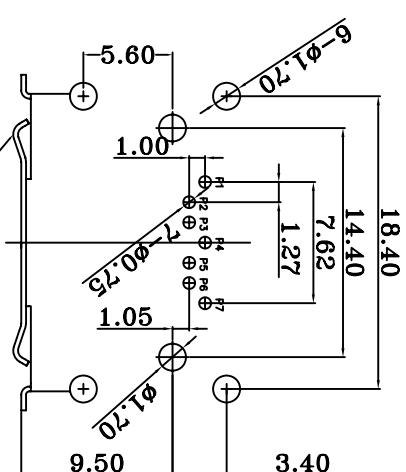
**1.27 Pitch**

**$7.62 \pm 0.15$**

①

Ø1.50

RECOMMENDED PC BOARD LAYOUT  
(TOP VIEW)



C

D

E

F

G

**KLS Electronic Co., LTD**

B

C

D

E

F

G

UNLESS OTHERWISE  
SPECIFIED TOLERANCE

ANG	$\pm 5^\circ$
0	$\pm 0.3$
0.0	$\pm 0.15$
0.00	$\pm 0.05$

SCALE      UNIT

mm

DRAWN      LI BEI LIN      06/06/08 DRAWN NAME

CHECKED      /      /  
APPROVED      /      /  
E\_SATA 7P - C (DIP Type)

PRDUCT NO.

SIZE      REV  
A4      A  
PILE NAME:  
A

1

2

3

4

5

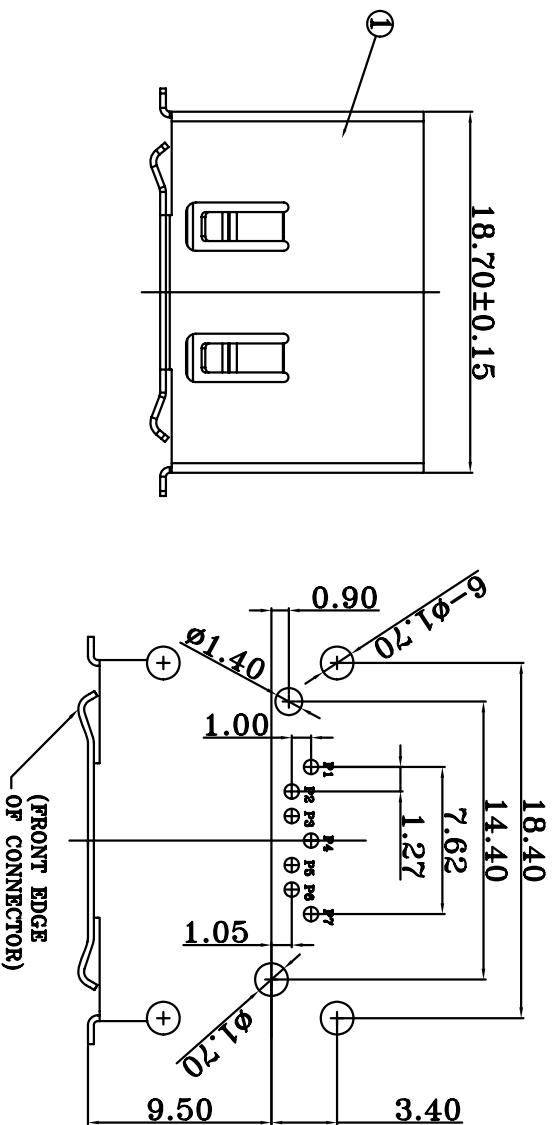
6

7

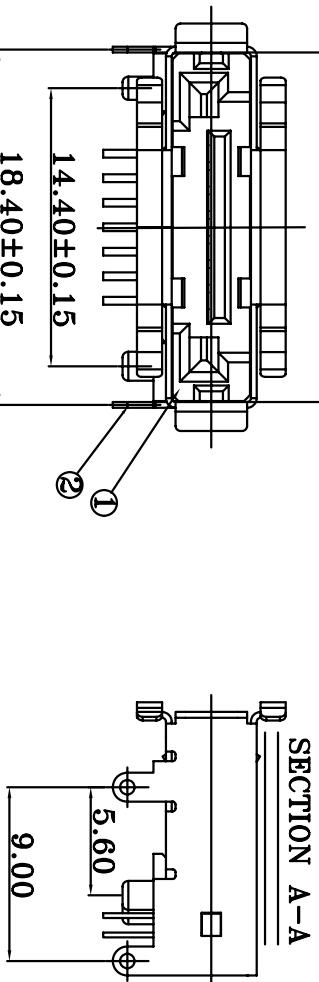
8

9

REV	6	DESCRIPTION	APPRO.CHANGE	DATE
Δ		原始尺寸		



### RECOMMENDED PC BOARD LAYOUT



THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO \*\*\* INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

KLS Electronic co.,LTD

QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		SIGNATORY	DATE
	MM	INCH		
▼ ±0.15	0~5	0~5	DRAW	CUSTOMER COPY
▲ ±0.20	5~10	±---	DESIGN	TITLE: E_SATA 7P - D (DIP Type)
10~20 ±0.25	10~20	±---	DWG NO.	061204-R
20~ ±0.30	20~	±---	(OLD)PART NO.	_____
ANGULAR ±1°			SCALE	1:1 A4 ⊕ UNT:mm SHEET:1 of 1

1

2

3

4

56

7

8

9

## SPECIFICATIONS

### 1.MATERIAL:

Housig: LCP UL 94V-0

Color: Black

Contact: Phosphor bronze

### 2.FINSH:

Contact: 3u" Gold/Tin plating on contact area

100u" min.Tin-Lead Plating on

### soldertails

50u" min.Nickel underplating over

### over all

100u" min.Tin-Lead plating on

### soldertails

50u" min.Nickel underplating over

all

C

D

E

F

G

## PCB LAYOUT

C

D

E

F

G

B

A

B

C

D

E

F

G

A

B

C

1

2

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4

5

6

7

8

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