

Battery Connector

KQ03-Series

No.	제 품 명	Pin 수	용 도	Size (가로*세로*높이)	Top view	Bottom View
1	KQ03B-3R	3	HHP	9.5*4.9*7.5mm		
2	KQ03C-3R	3	HHP	9.5*4.9*7.5mm		
3	KQ03-3R	3	HHP	7.3*4.9*6.9mm		
4	KQ03SA-3R	3	HHP	11*4.4*5.3mm, SH(3.2)		
5	KQ03SB-3R	3	HHP	8.2*4.0*5.3mm		
6	KQ03SC-3R	3	HHP	10.3*5.5*4.2mm, SH(1.4)		
7	KQ03SB-4R	4	HHP	10.7*4.0*5.3mm		
8	KQ03SG-4R	4	HHP	11.9*4.95*3.5mm		
9	KQ03CA-3R	3	Charger	12.0*6.0*5.7mm		
10	KQ03CA-4R	4	Charger	14.5*6.0*5.7mm		
11	KQ03LB-2R	2	HHP	6.6*6.5*3.9mm		
12	KQ03SF-3R	3	HHP	10.3*5.3*4.0mm		
13	KQ03LC-3R	3	HHP	9.6*5.8*3.9mm		
14	KQ03SB1-3R	3	HHP	8.2*4.0*5.3mm		
15	KQ03SGW-4R	4	HHP	12.4*4.95*3.5mm		
16	KQ03SGW-3R	3	HHP	10.1*4.95*3.5mm		
17	KQ03LC-4R	4	HHP	12.6*5.8*3.9mm		
18	KQ03SB1-4R	4	HHP	10.7*4.0*5.3mm		
19	KQ03SL-3R	3	HHP	8.2*4.5*4.8mm		
20	KQ03LD-3R	3	HHP	8*4.5*4.35mm		
21	KQ03LE-3R	3	HHP	10.6*5.5*4.0mm		
22	KQ03LE-4R	4	HHP	12.6*5.5*4.0mm		
23	KQ03LE-4R(S)	4	HHP	12.6*5.5*4.0mm		
24	KQ03LH-4R	4	HHP	13.0*4.5*4.9mm		
25	KQ03LJ-3R(11)	3	HHP	11.6*5.5*5.1mm		

Battery Connector

KQ03-Series

No.	제품명	Pin 수	용도	Size (가로*세로*높이)	Top view	Bottom View
26	KQ03SL-4R	4	HHP	10.7*4.5*4.8mm		
27	KQ03LP-3R	3	HHP	10.6*5.5*4.4mm		
28	KQ03LP1-3R	3	HHP	10.6*5.5*4.4mm		
29	KQ03LP2-3R	3	HHP	10.6*5.5*4.4mm		
30	KQ03LP3-3R	3	HHP	10.6*5.5*4.4mm		
31	KQ03LP4-3R	3	HHP	10.6*5.5*4.4mm		
32	KQ03LQ-3R	3	HHP	10.6*5.5*4.6mm		
33	KQ03LQ1-3R	3	HHP	10.6*5.5*4.6mm		
34	KQ03LQ1-4R	4	HHP	13.1*5.5*4.6mm		
35	KQ03LK-4R	4	HHP	13.1*5.5*3.9mm		
36	KQ03LC2-2.5P-4R	4	HHP	10.9*5.7*3.5mm		



Hirose Korea Battery Connector

Hirose Korea Battery Connector

KQ03-Series

Title

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2.Product Specifications----- Page 4

3.Individual Informations----- Page 5~40

No.	Product Name	Contacts	Size (widthxLengthxHeight)	page
1	KQ03B-3R	3	9.5*4.9*7.5mm	5
2	KQ03C-3R	3	9.5*4.9*7.5mm	6
3	KQ03-3R	3	7.3*4.9*6.9mm	7
4	KQ03SA-3R	3	11*4.4*5.3mm, SH(3.2)	8
5	KQ03SB-3R	3	8.2*4.0*5.3mm	9
6	KQ03SC-3R	3	10.3*5.5*4.2mm, SH(1.4)	10
7	KQ03SB-4R	4	10.7*4.0*5.3mm	11
8	KQ03SG-4R	4	11.9*4.95*3.5mm	12
9	KQ03CA-3R	3	12.0*6.0*5.7mm	13
10	KQ03CA-4R	4	14.5*6.0*5.7mm	14
11	KQ03LB-2R	2	6.6*6.5*3.9mm	15
12	KQ03SF-3R	3	10.3*5.3*4.0mm	16
13	KQ03LC-3R	3	9.6*5.8*3.9	17
14	KQ03SB1-3R	3	8.2*4.0*5.3mm	18
15	KQ03SGW-4R	4	12.4*4.95*3.5mm	19
16	KQ03SGW-3R	3	10.1*4.95*3.5mm	20
17	KQ03LC-4R	4	12.6*5.8*3.9mm	21
18	KQ03SB1-4R	4	10.7*4.0*5.3mm	22
19	KQ03SL-3R	3	8.2*4.5*4.8mm	23
20	KQ03LD-3R	3	8*4.5*4.35mm	24
21	KQ03LE-3R	3	10.6*5.5*4.0mm	25
22	KQ03LE-4R	4	12.6*5.5*4.0mm	26
23	KQ03LE-4R(S)	4	12.6*5.5*4.0mm	27
24	KQ03LH-4R	4	13.0*4.5*4.9mm	28
25	KQ03LJ-3R(11)	3	11.6*5.5*5.1mm	29

Hirose Korea Battery Connector

KQ03-Series

No.	Product Name	Contacts	Size (widthxLengh×Height)	page
26	KQ03SL-4R	4	10.7*4.5*4.8	30
27	KQ03LP-3R	3	10.6*5.5*4.4	31
28	KQ03LP1-3R	3	10.6*5.5*4.4	32
28	KQ03LP2-3R	3	10.6*5.5*4.4	33
28	KQ03LP3-3R	3	10.6*5.5*4.4	34
28	KQ03LP4-3R	3	10.6*5.5*4.4	35
28	KQ03LQ-3R	3	10.6*5.5*4.6	36
28	KQ03LQ1-3R	3	10.6*5.5*4.6	37
28	KQ03LQ1-4R	4	13.1*5.5*4.6	38
29	KQ03LK-4R	4	13.1*5.5*3.9	39
30	KQ03LC2-2.5P-4R	4	13.1*5.5*3.9	40

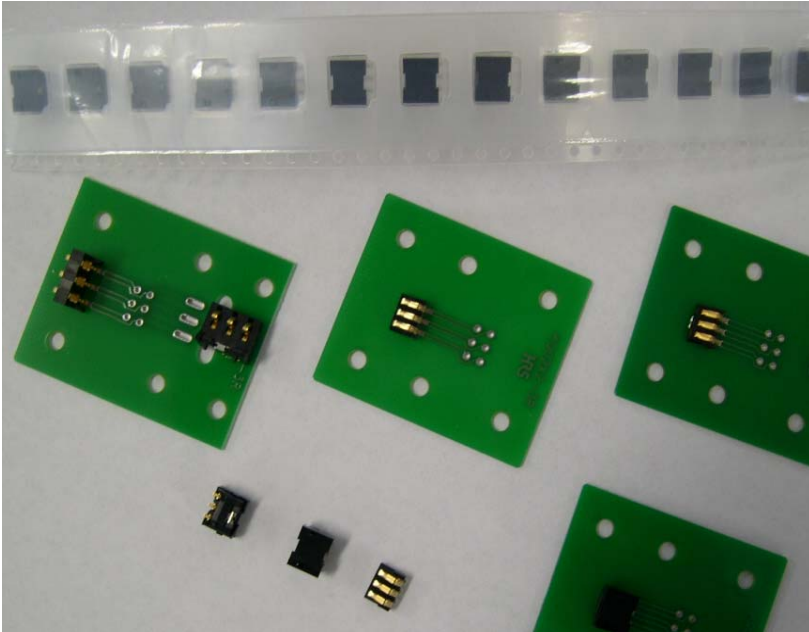
5.Reflow Profile (Conventional)----- Page 41

6.Reflow Profile (Lead-free)----- Page 42

7.Application example----- Page 43

HIROSE Battery Connector

KQ02*/KQ03-Series



Mobile Phone Assembly

■ Features

1. Bellows-type

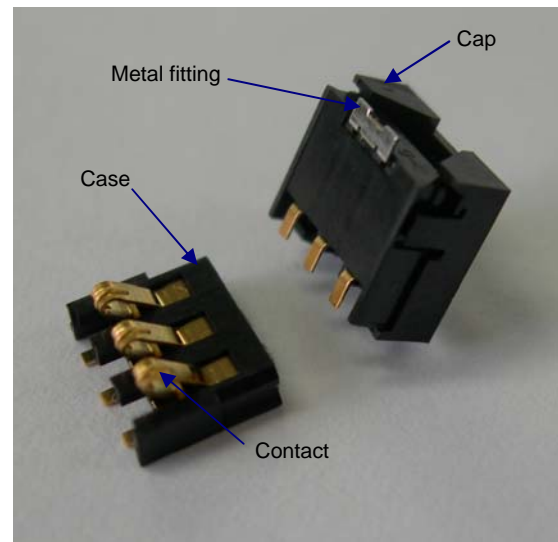
Using a bellows-type contact construction gives the product the dropping shock and torsion resistance required particularly for portable equipments.

2. Small Size

These connector are small size with a height of 1.75mm, length of 6.6mm, and width of 5.5mm.

3. Applications

Mobile phones, PDA, mobile info-communications terminals, and other small portable devices



■ Product Specifications

Rating	Current 3A	Operating temperature range	Storage temperature range
	Voltage AC 100V	- 30℃ ~ + 80℃	- 40℃ ~ + 85℃ (Include package)

Item	Test Method	Condition
1.Insulation Resistance	DC 500V	1000MΩ Min
2.Voltage Proof	AC 500V for 1min	No Flashover or Breakdown
3.Contact Resistance	100mA (DC or 1000Hz)	50mΩ Max
4.Vibration	Frequency 10~55Hz Single Amplitude 0.76mm at 2Hr for 3Direction.	No Electrical Discontinuity of 10μs
5.Humidity	Temperature : 40±2℃	Contact Resistance : 100mΩMax
	Relative Humidity : 90~95% Duration : 96Hr	Insulation Resistance : 10MΩMin
6.Mechanical Operation	Mated 5000/7000 Times	Contact Resistance : 100mΩMax

■ Materials

Part	Material	Finish	Remark
Case	Nylon / LCP	Black	UL94V-0
Cap	Nylon / SUS304	Black	UL94HB
Contact	Copper Alloy	Gold plating	-
Metal Fitting	Copper Alloy	Tin plating	-

■ Ordering Information

KQ * - * R - SMD**

①

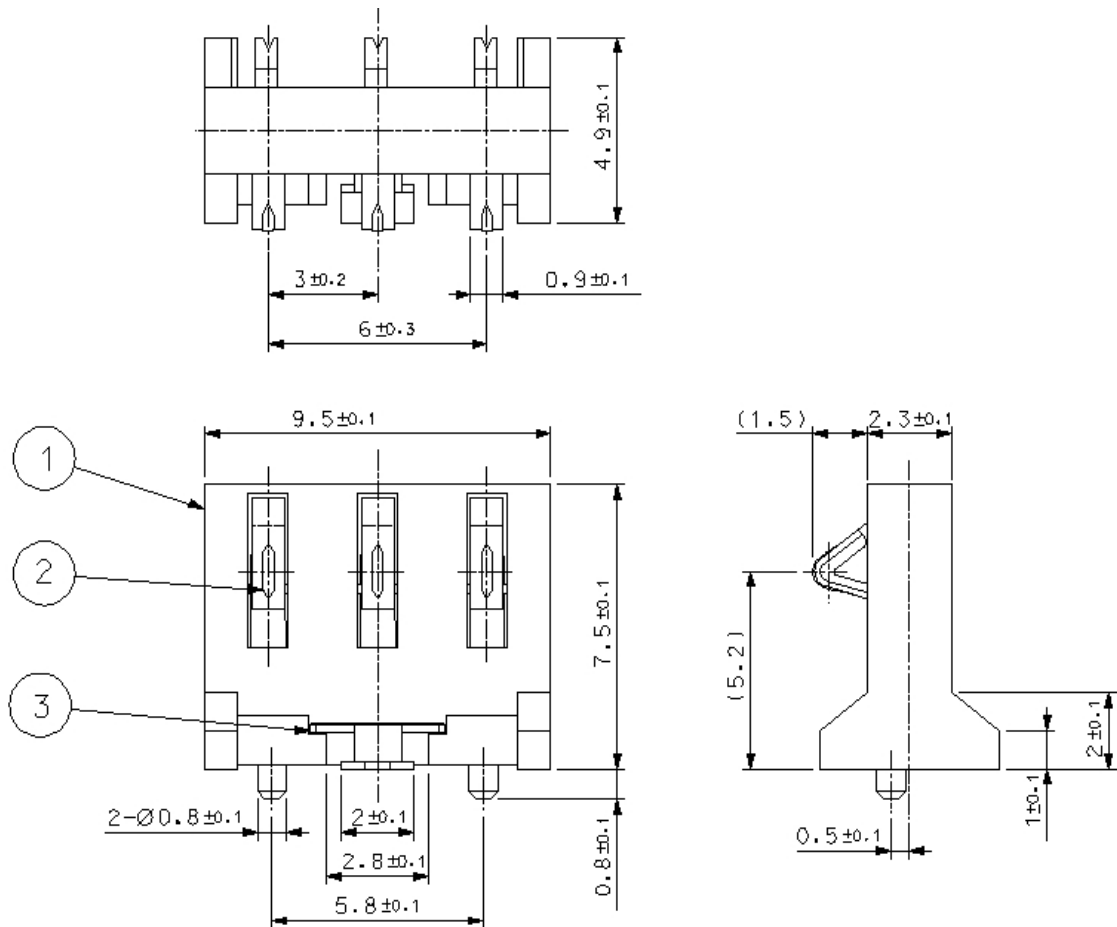
②

③

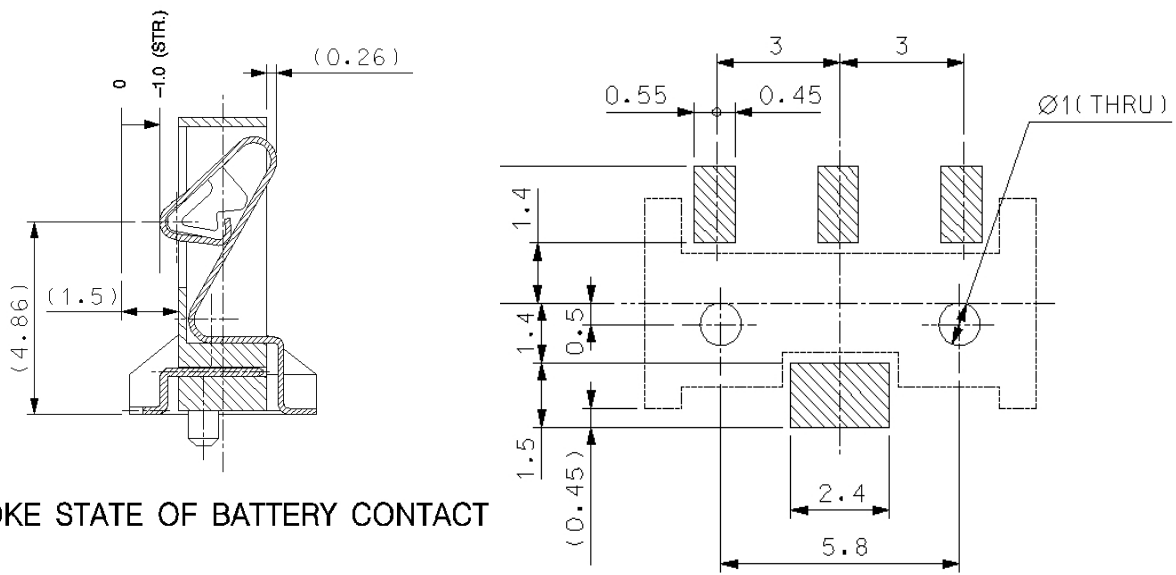
④

①	Series Name	KQ02 : Horizontal Type Battery Connector KQ03 : Vertical Type Battery Connector
②	Mold Height	X, X1, X2, X3, X4, X5, X6, H1, H2
③	Contact number	3pin, 4pin
④	Solder type	Surface direct placement (SMT type)

■ **KQ03B-3R**



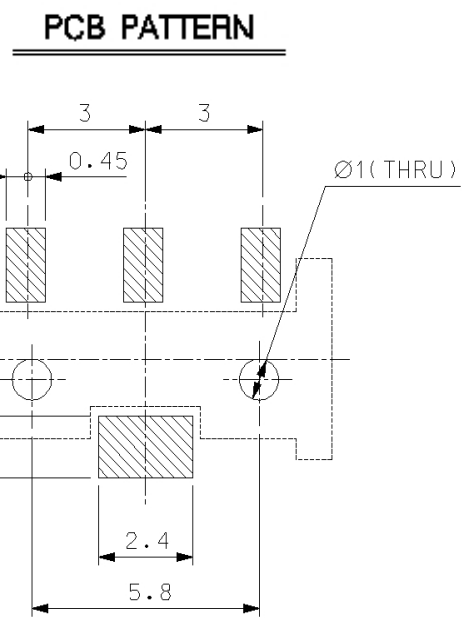
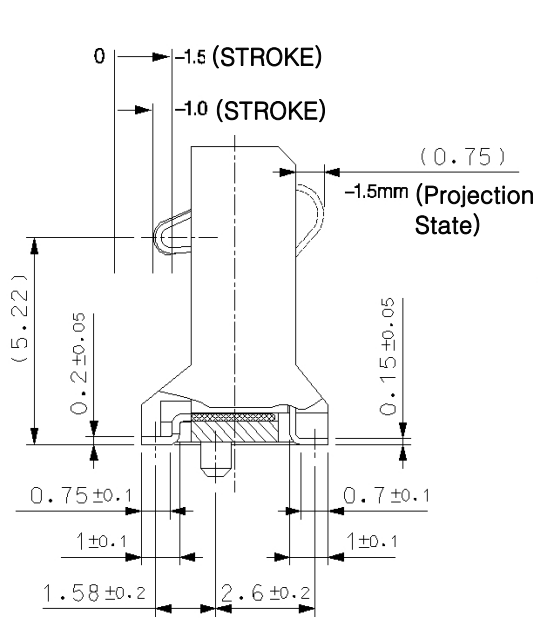
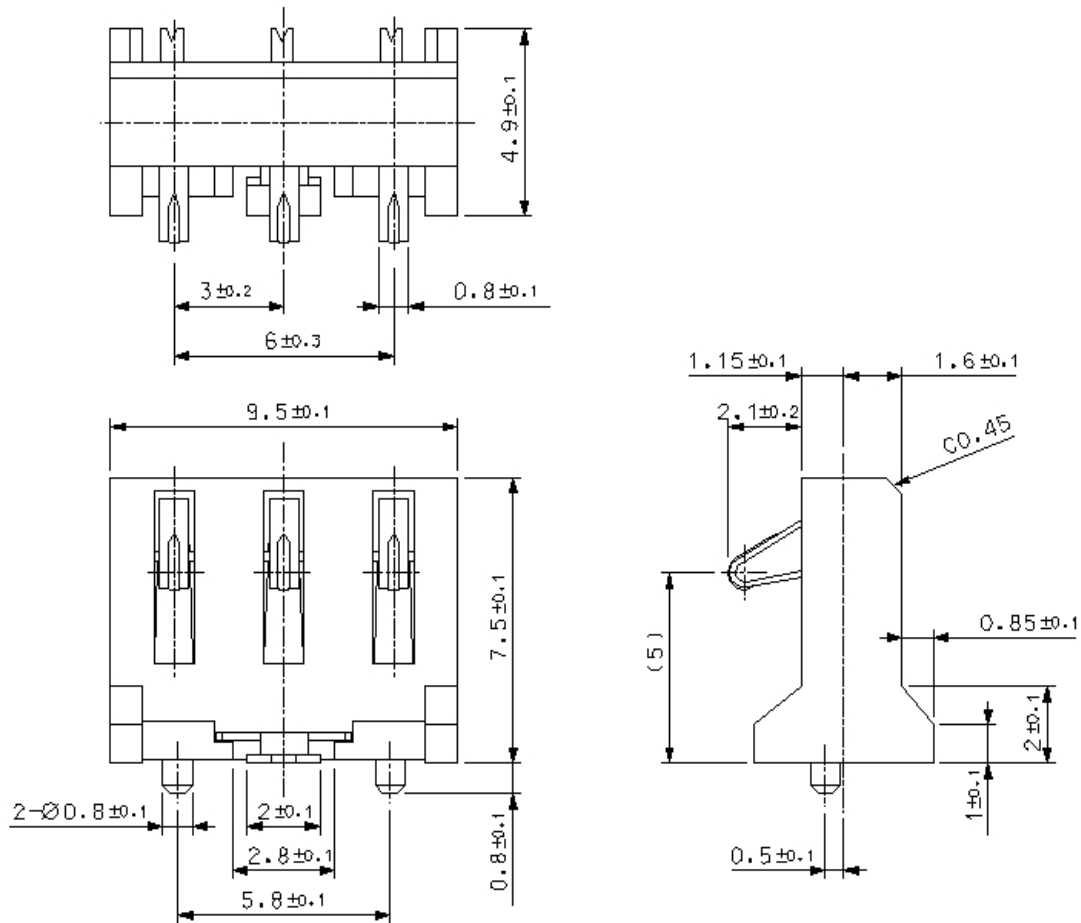
PCB PATTERN



STROKE STATE OF BATTERY CONTACT

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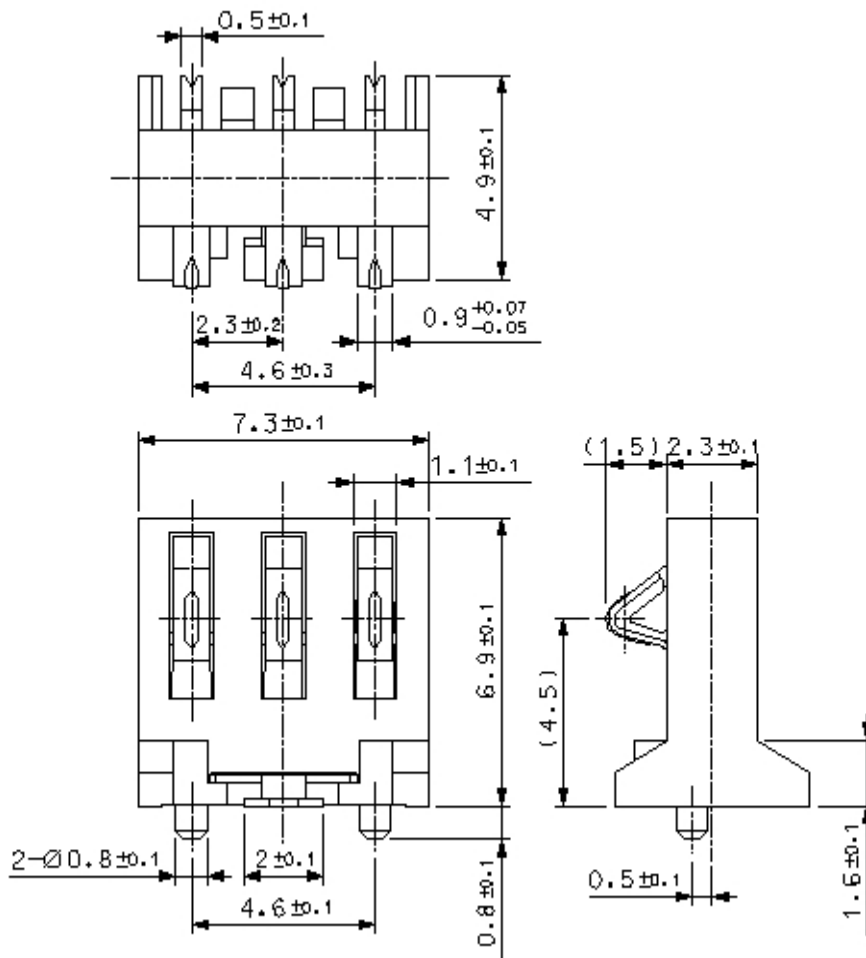
■ KQ03C-3R



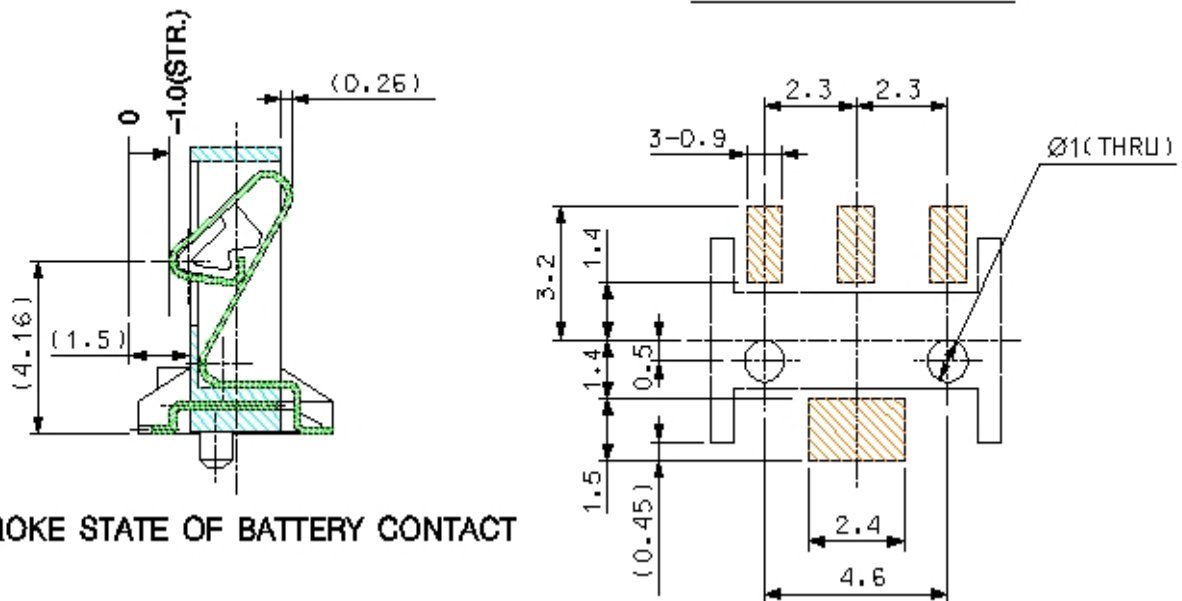
STROKE STATE OF BATTERY CONTACT

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■ **KQ03-3R**



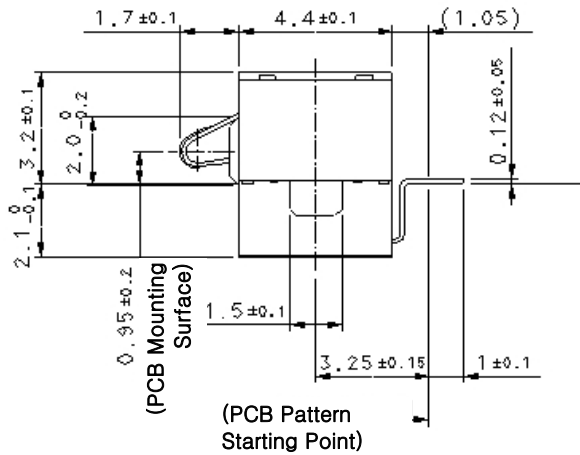
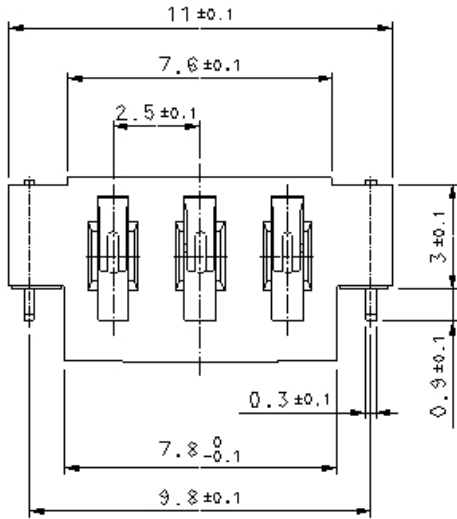
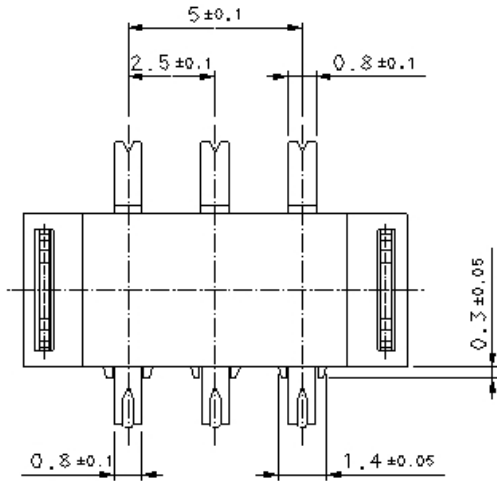
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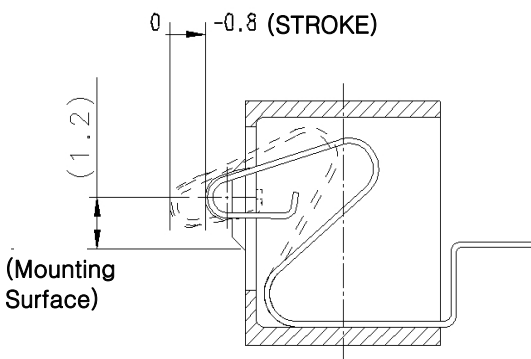
STROKE STATE OF BATTERY CONTACT

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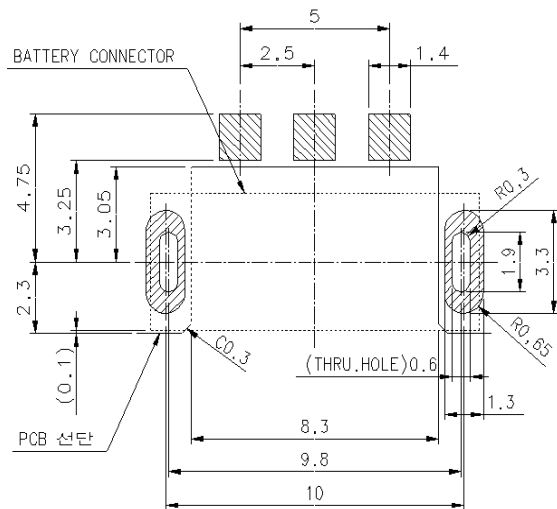
■ KQ03SA-3R



PCB PATTERN

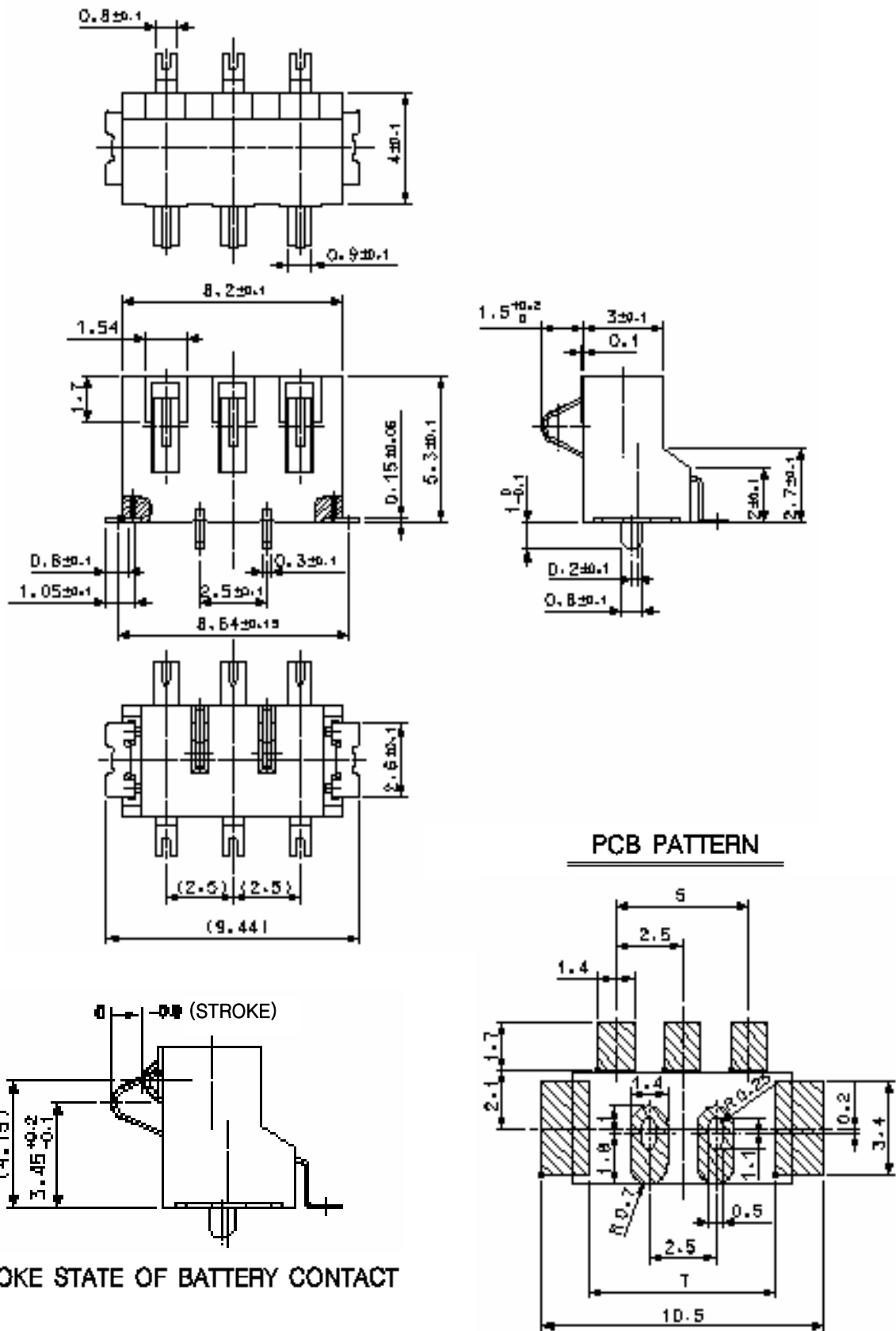


STROKE STATE OF BATTERY CONTACT



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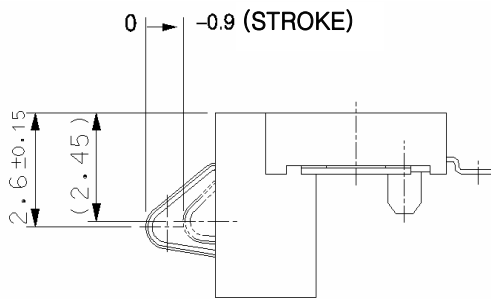
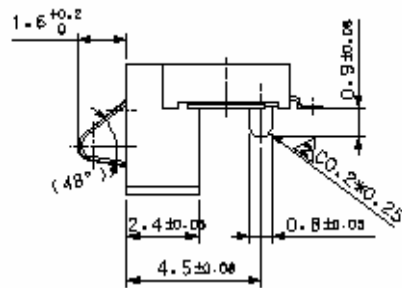
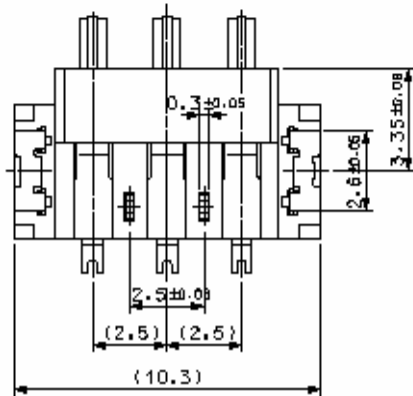
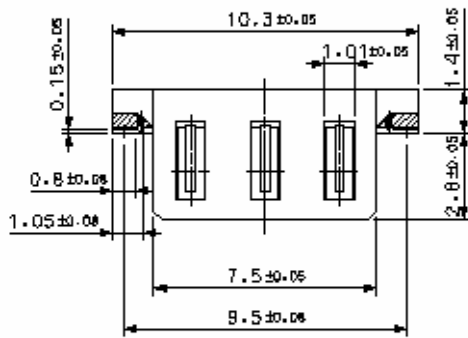
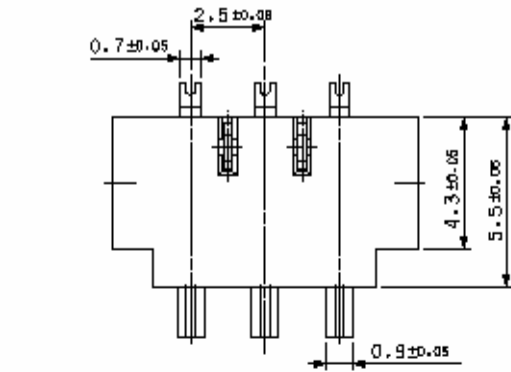
■ **KQ03SB-3R**



STROKE STATE OF BATTERY CONTACT

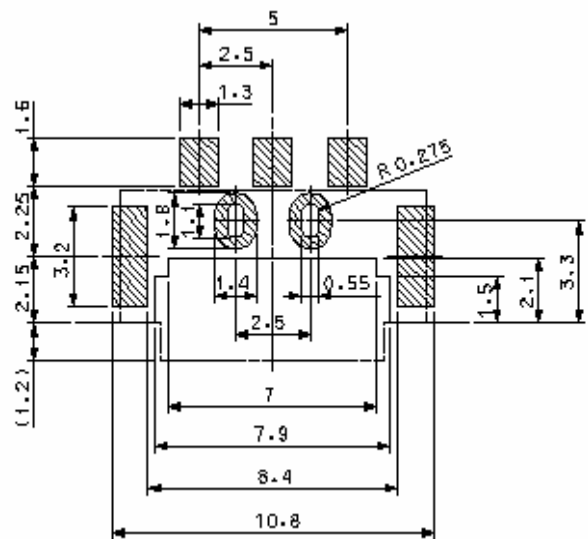
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■ KQ03SC-3R



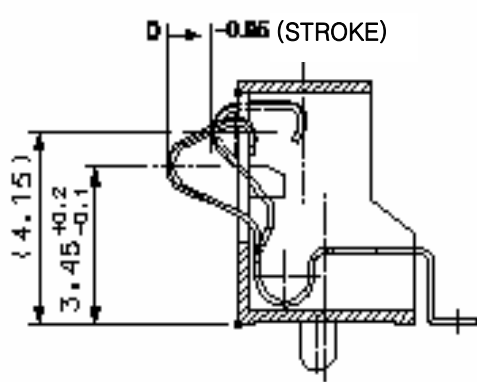
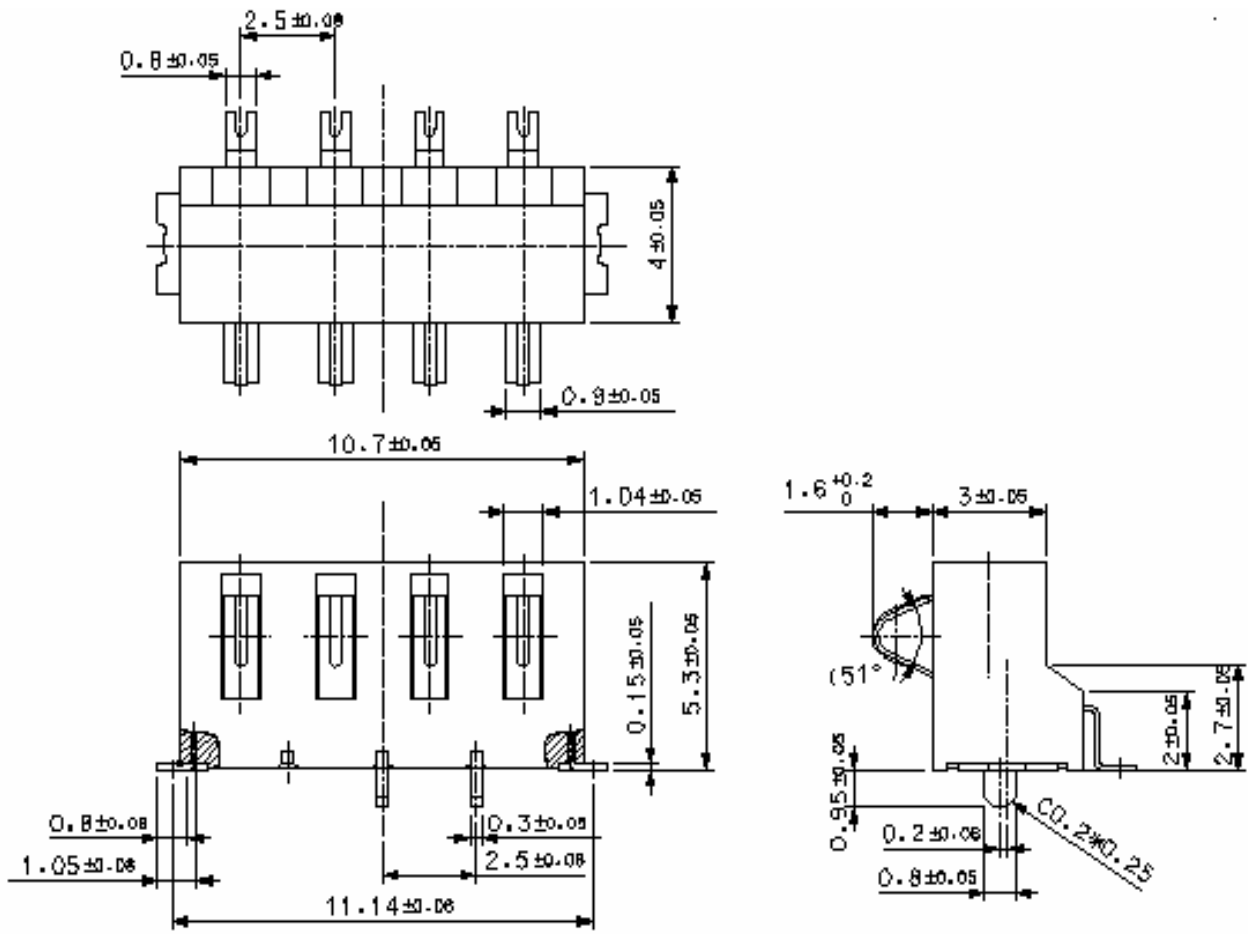
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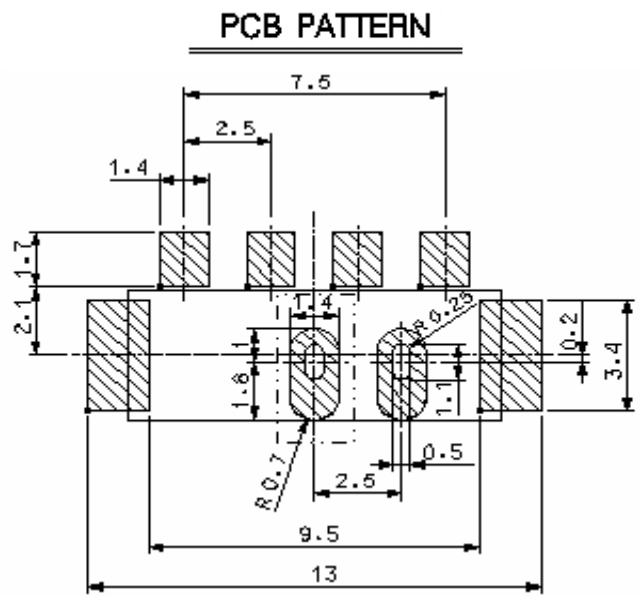


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■ KQ03SB-4R

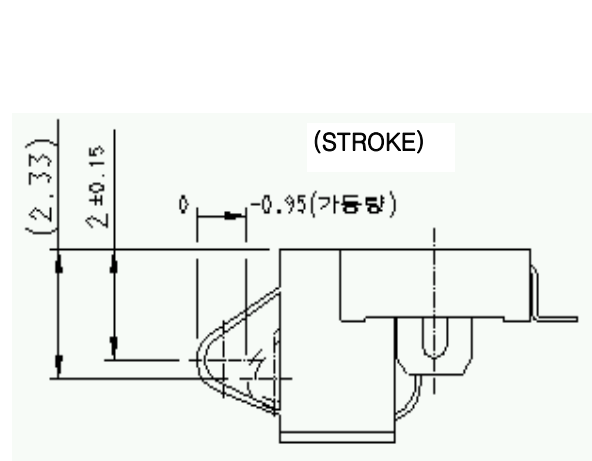
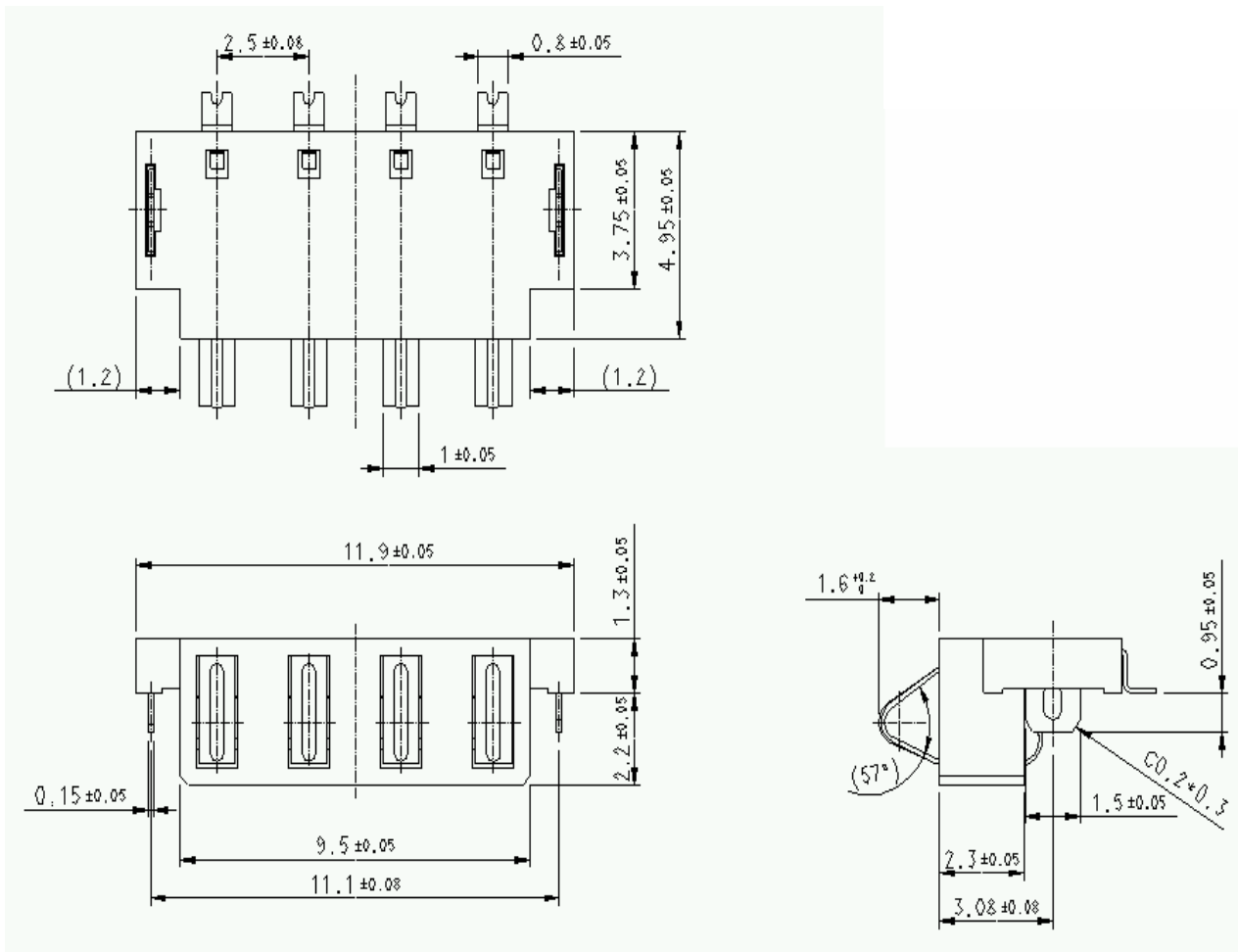


STROKE STATE OF BATTERY CONTACT

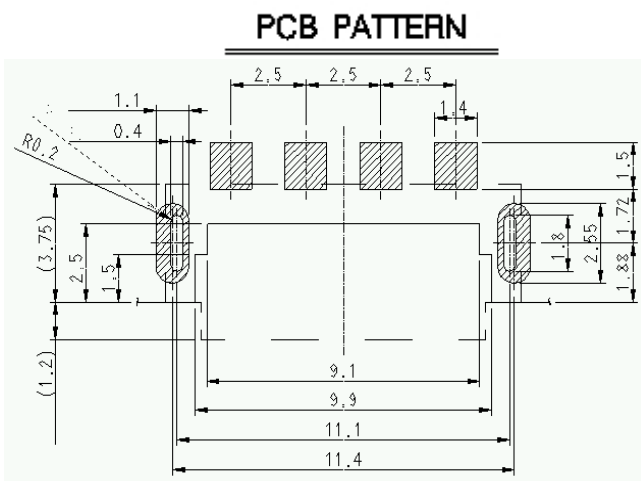


Hirose Part No.	Product Name	Contact	Package	Remark
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■ KQ03SG-4R

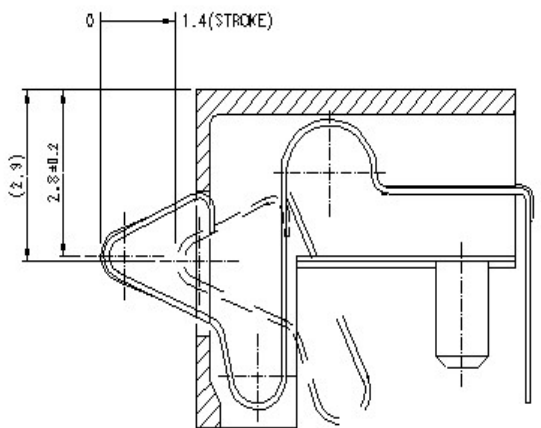
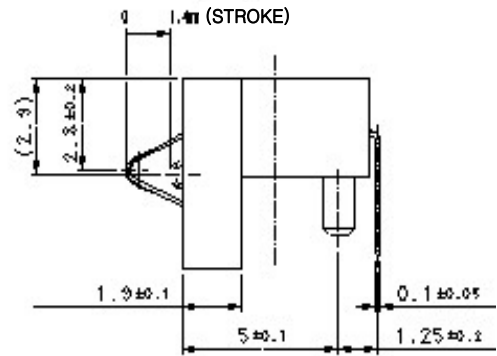
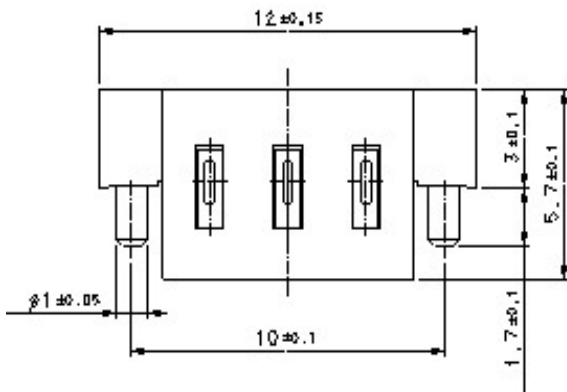
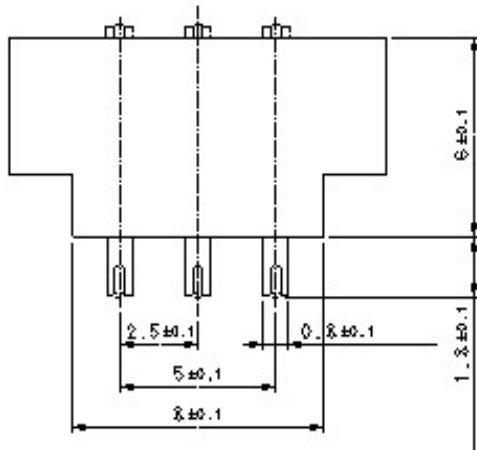


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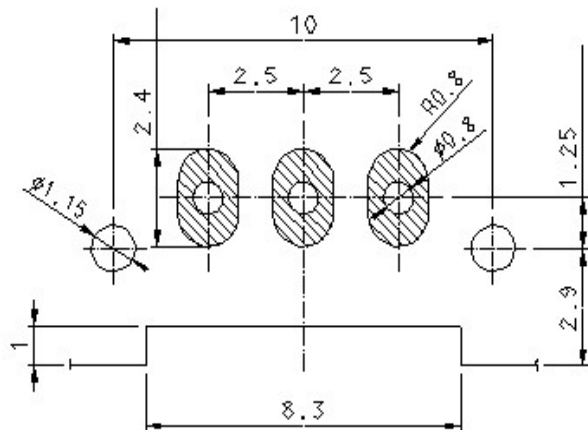
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CL 6226-0115-1	KQ03SG-4R	4	Emboss Tape	1,500ea/Reel

■ **KQ03CA-3R**



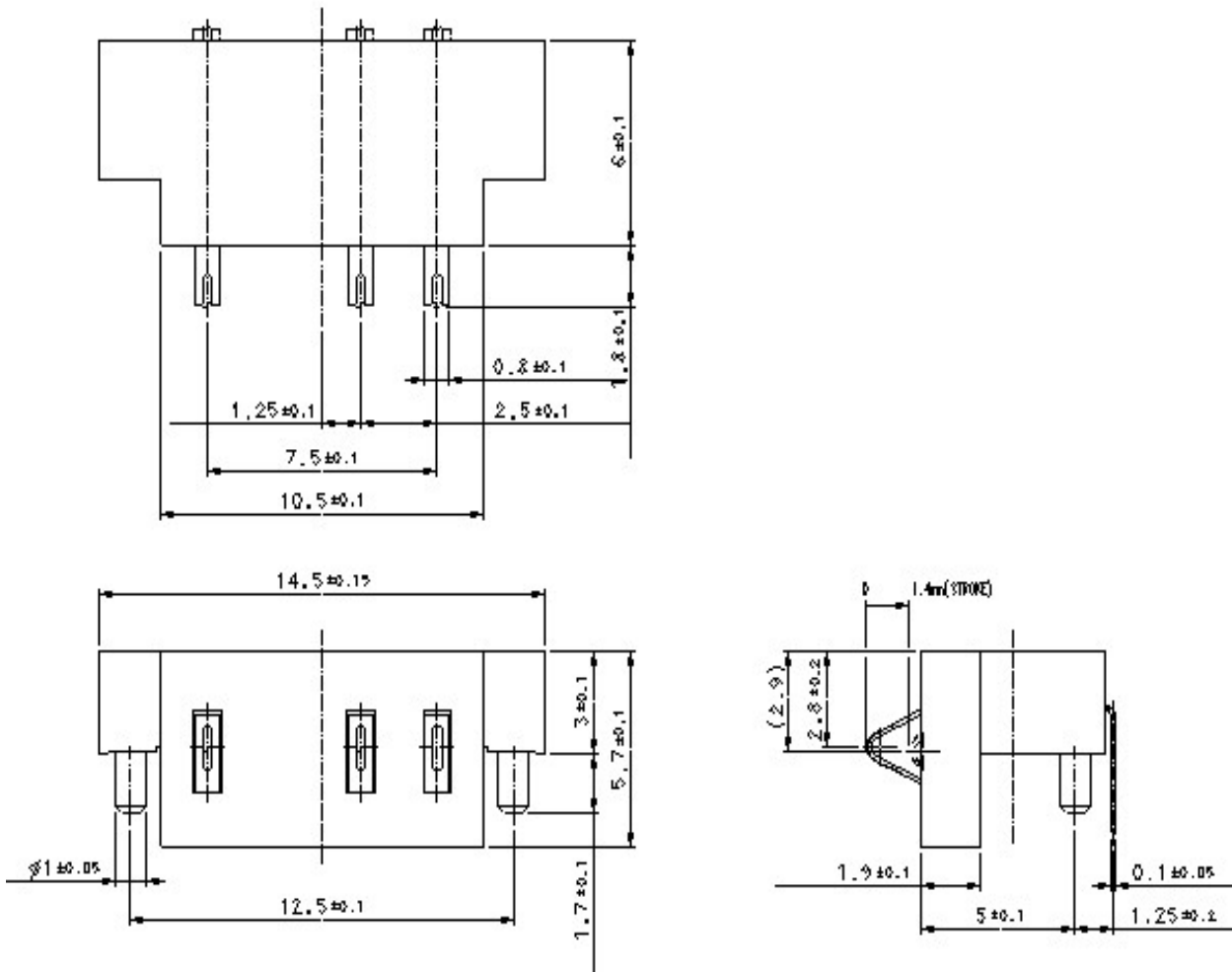
STROKE STATE OF BATTERY CONTACT

PCB (DIP SOLDERING) PATTERN

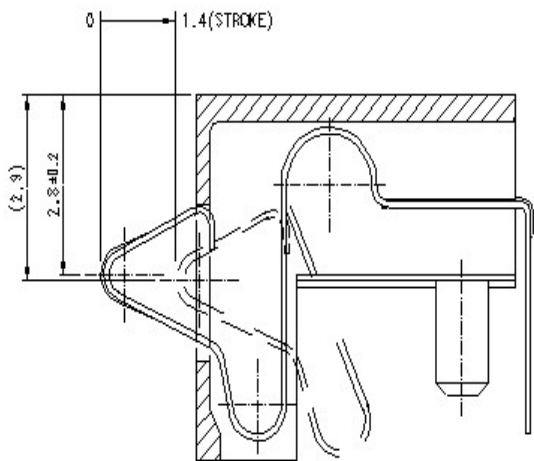


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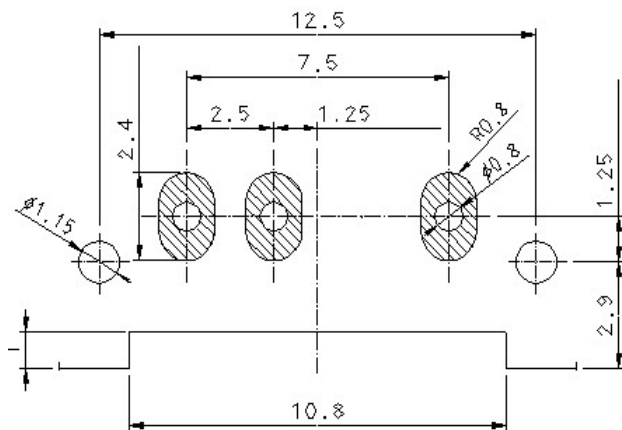
■ **KQ03CA-4R**



PCB (DIP SOLDERING) PATTERN

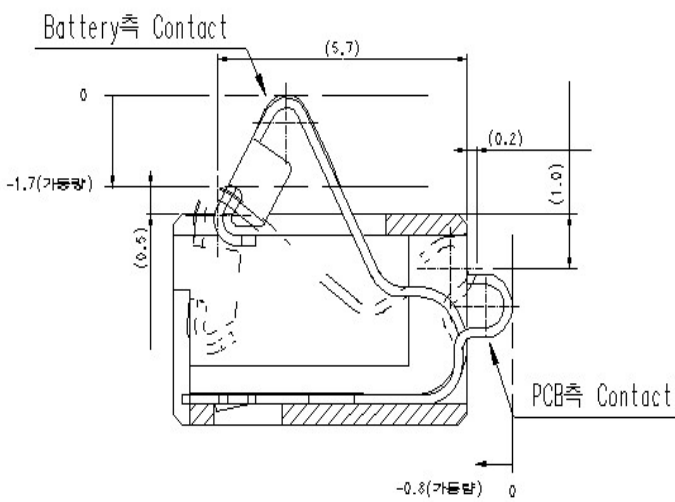
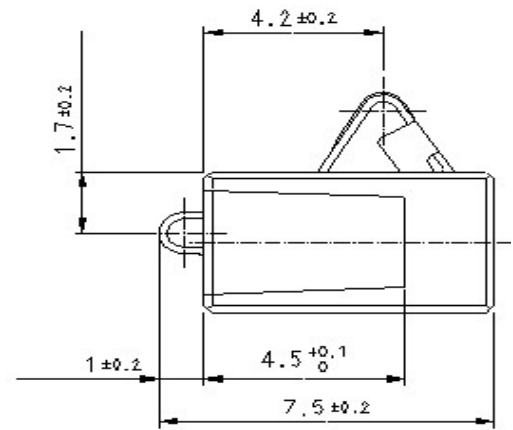
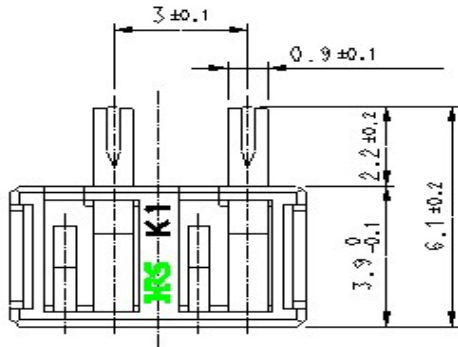
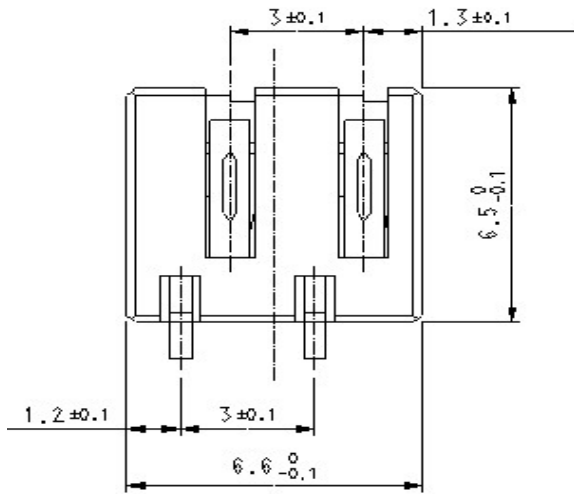


STROKE STATE OF BATTERY CONTACT



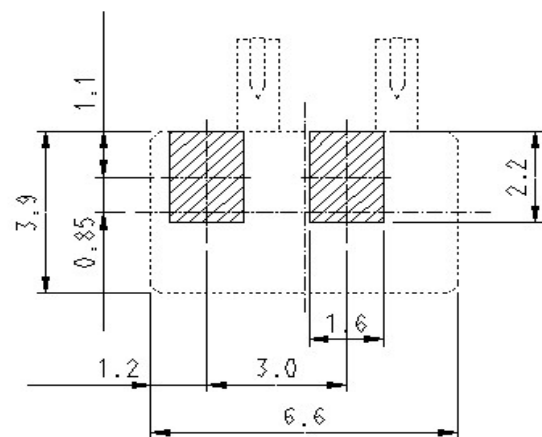
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■ KQ03LB-2R



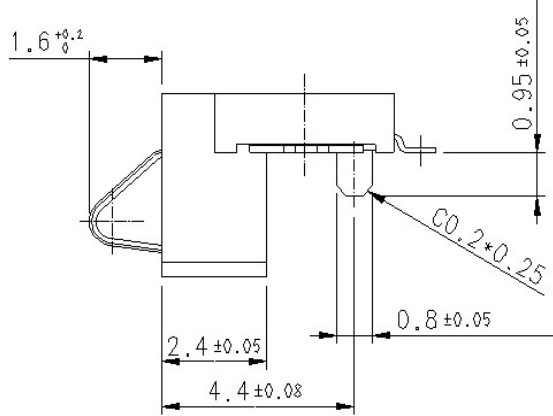
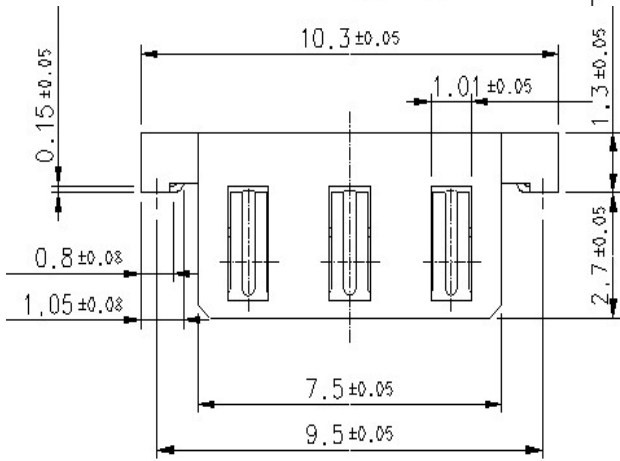
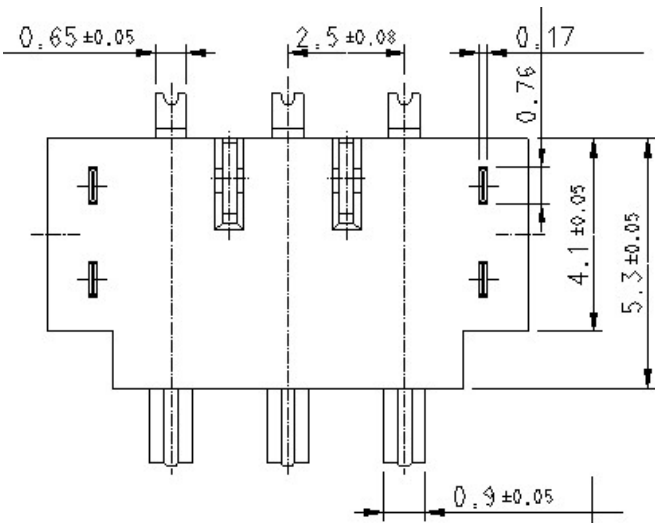
STROKE STATE OF BATTERY CONTACT

PCB PATTERN



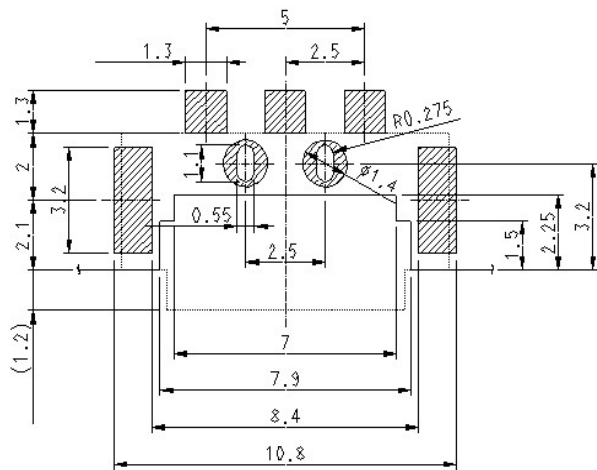
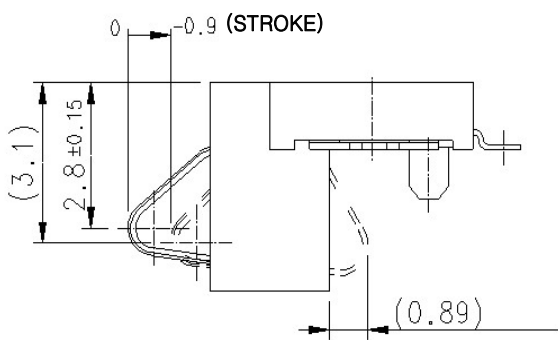
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KQ03SF-3R



단자 가동상태도

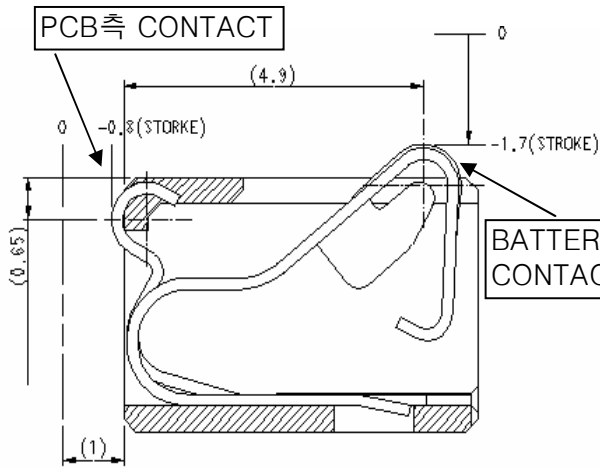
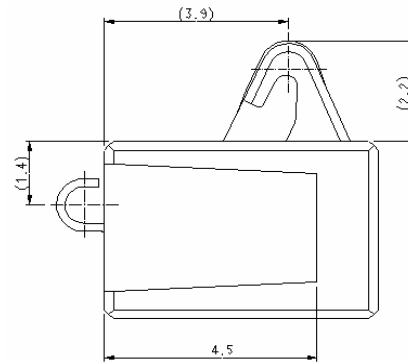
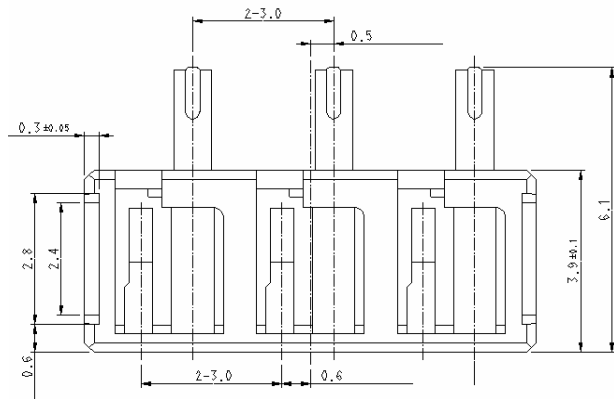
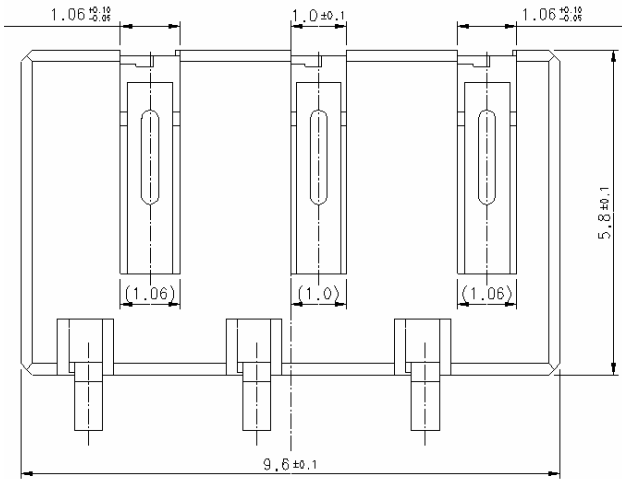
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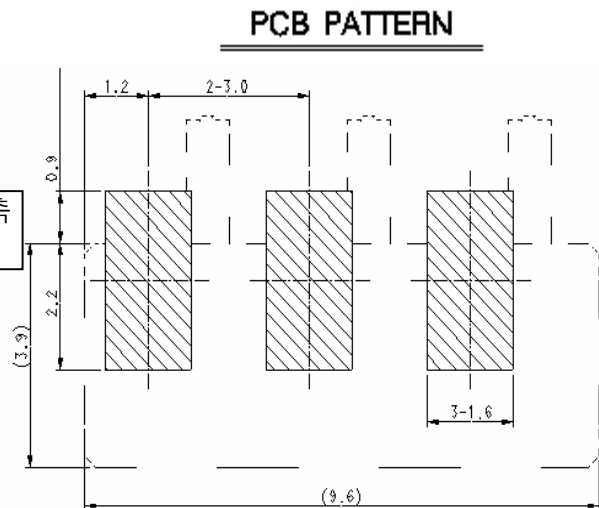
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0117-7	KQ03SF-3R	3	Emboss Tape	1,500ea/Reel

■ KQ03LC-3R

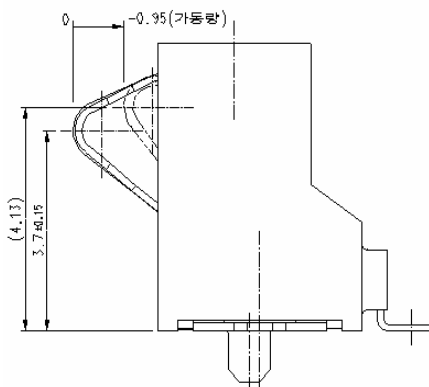
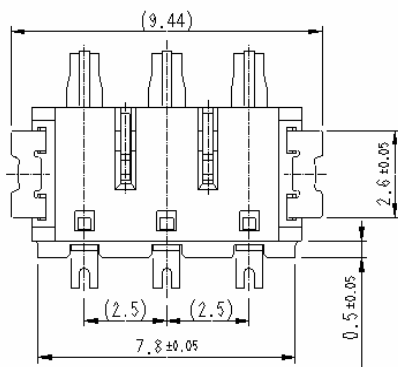
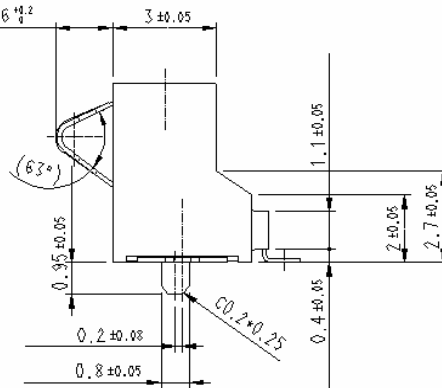
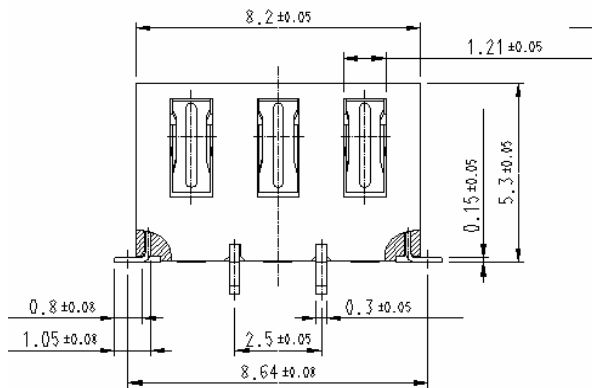
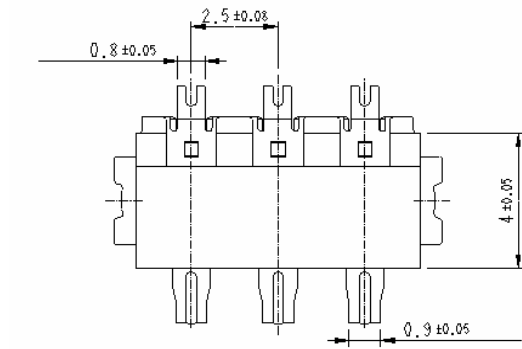


STROKE STATE OF BATTERY CONTACT



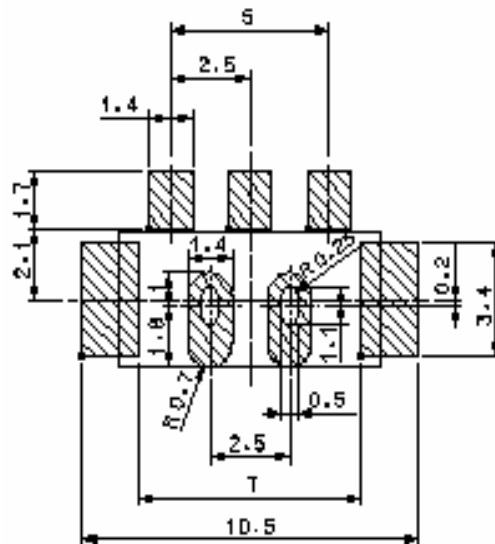
Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0118-0	KQ03LC-3R	3	TRAY	4000ea/BOX

■ KQ03SB1-3R



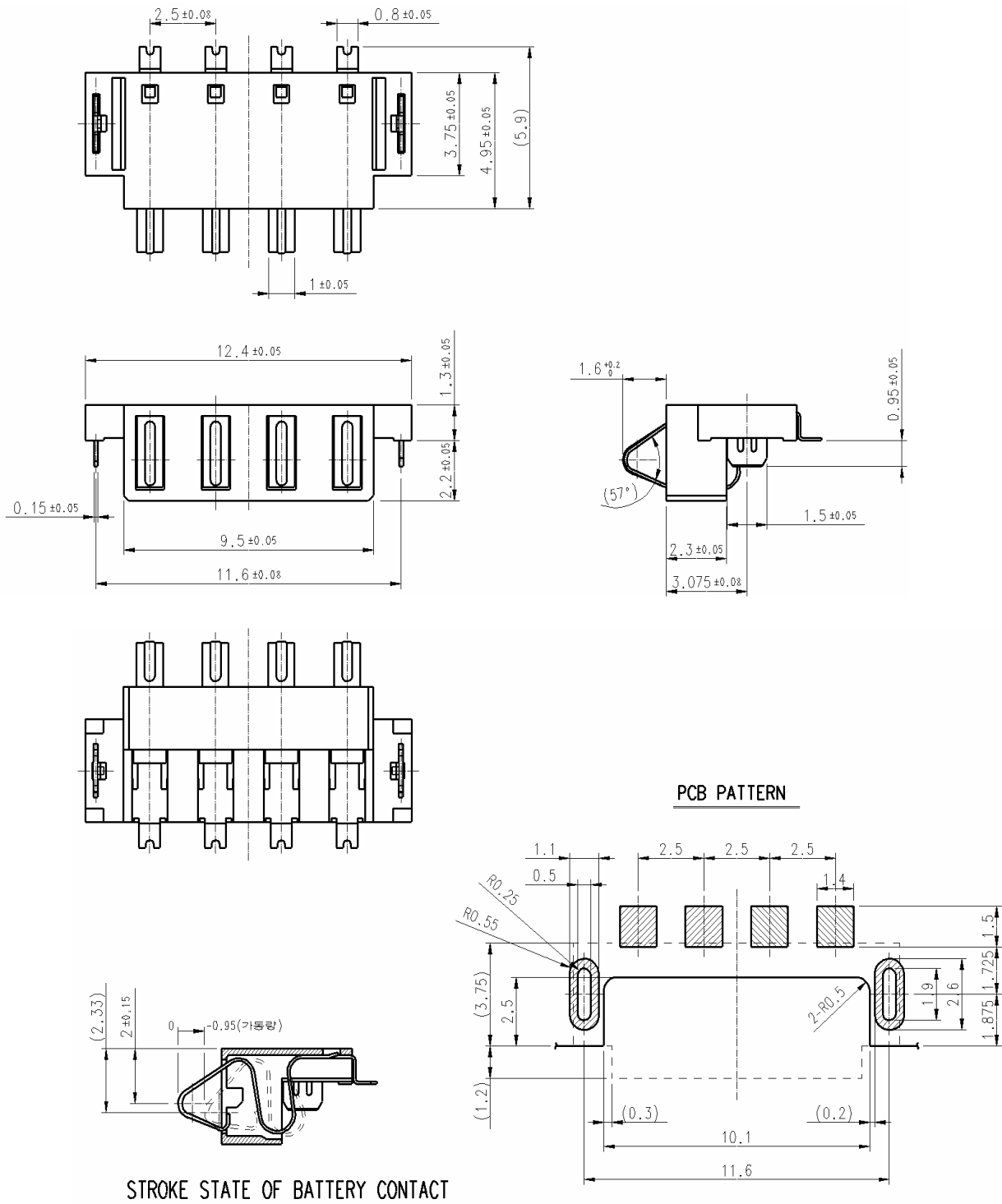
STROKE STATE OF BATTERY CONTACT

PCB PATTERN



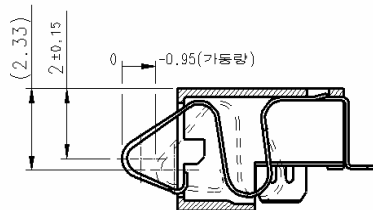
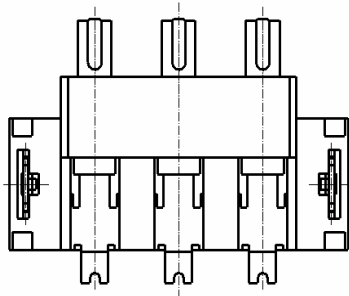
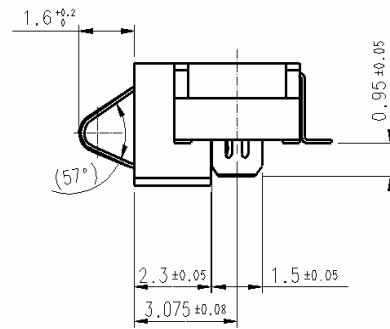
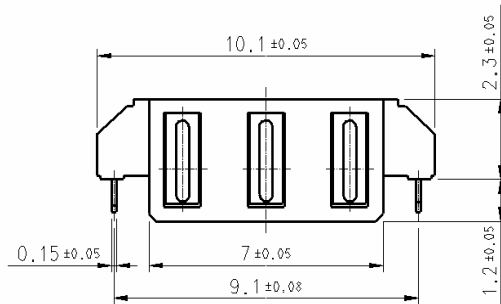
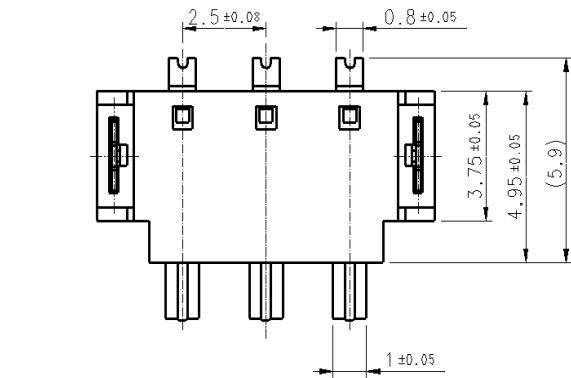
Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0120-1	KQ03SB1-3R	3	Emboss Tape	1,000ea/Reel

■ KQ03SGW-4R



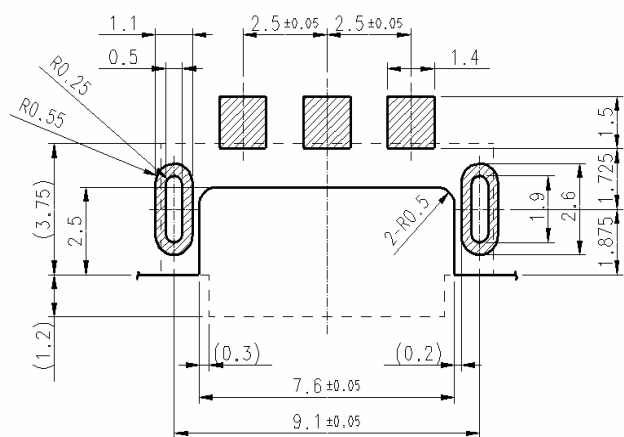
Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0121-4	KQ03SGW-4R	4	Emboss Tape	1,500ea/Reel

■ KQ03SGW-3R



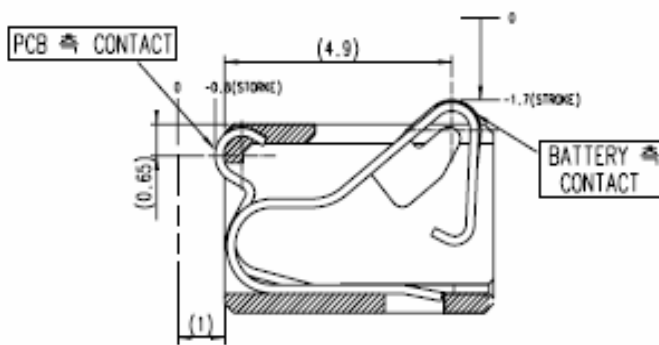
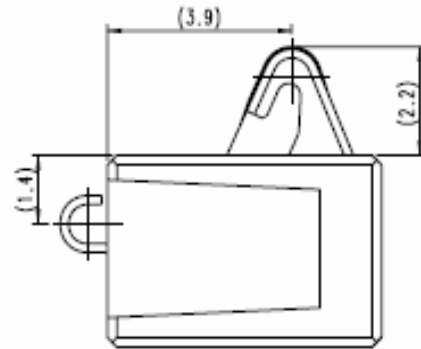
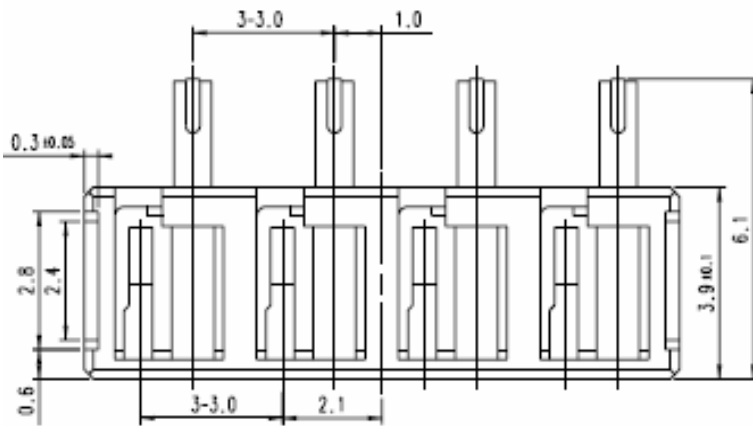
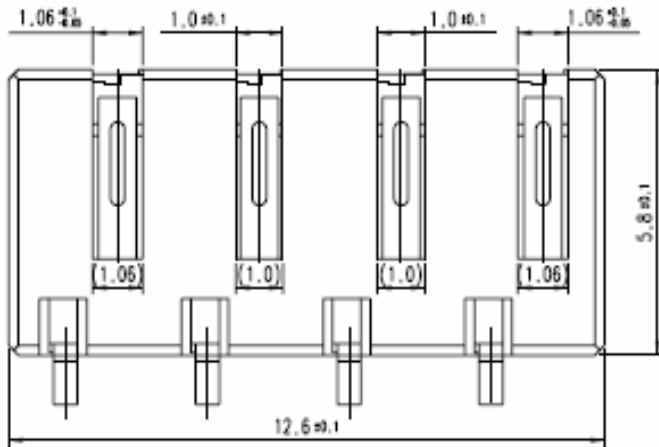
STROKE STATE OF BATTERY CONTACT

PCB PATTERN

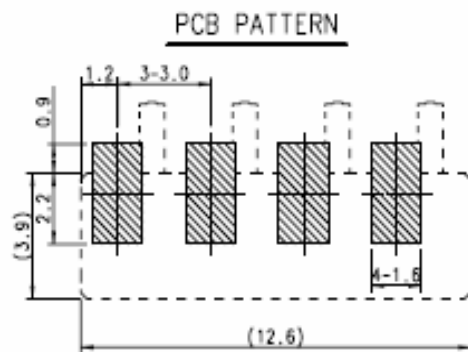


Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0119-2	KQ03SGW-3R	3	Emboss Tape	1,500ea/Reel

■ KQ03LC-4R

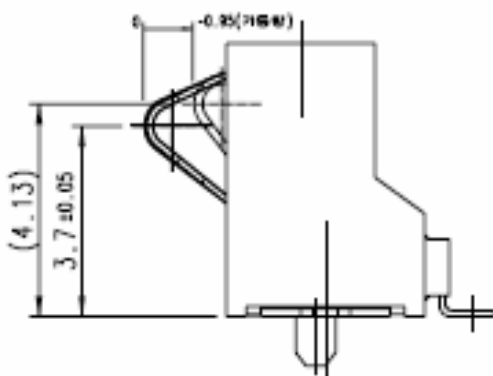
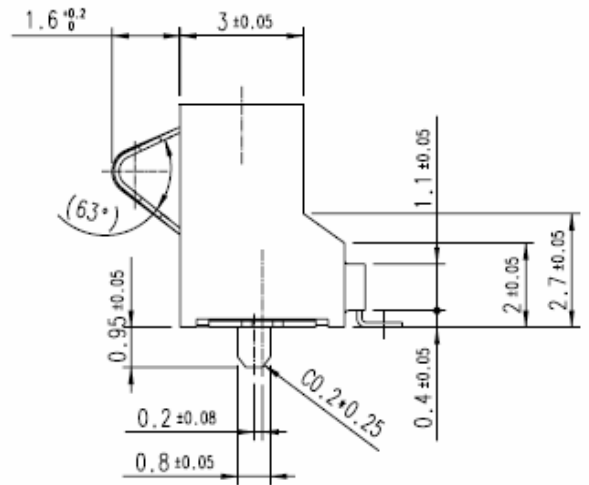
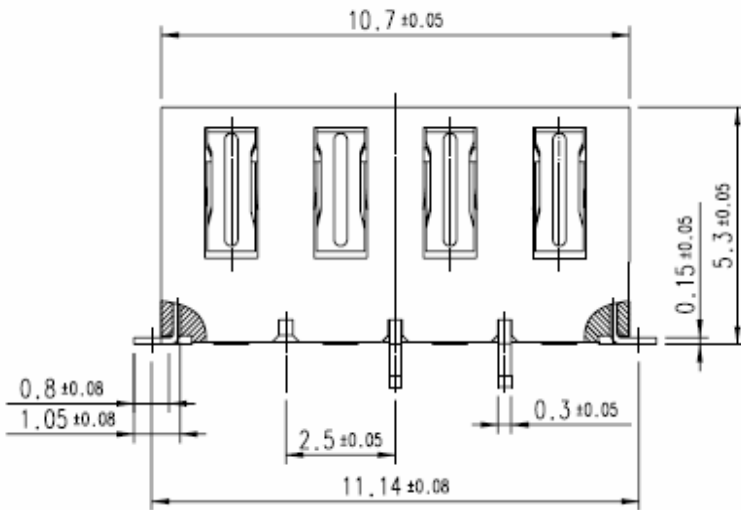
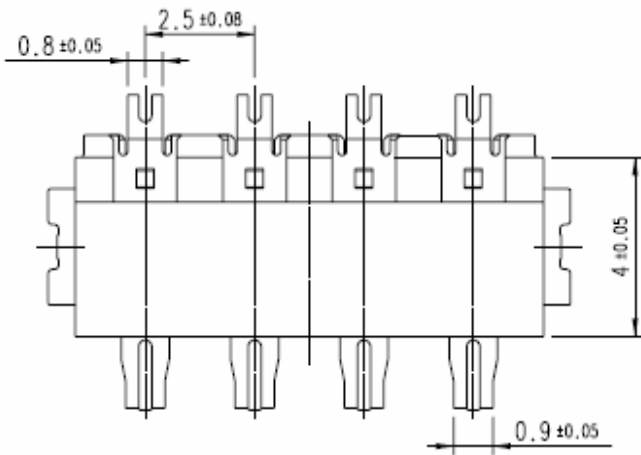


STROKE STATE OF BATTERY CONTACT

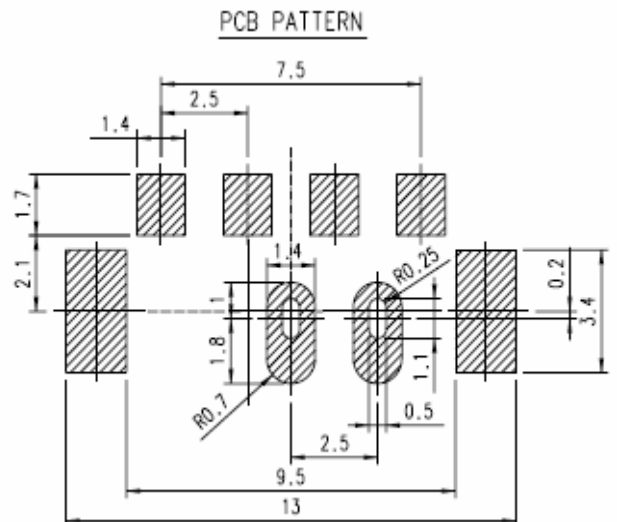


Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0127-0	KQ03LC-4R	4	TRAY	4,000ea/BOX

■ KQ03SB1-4R

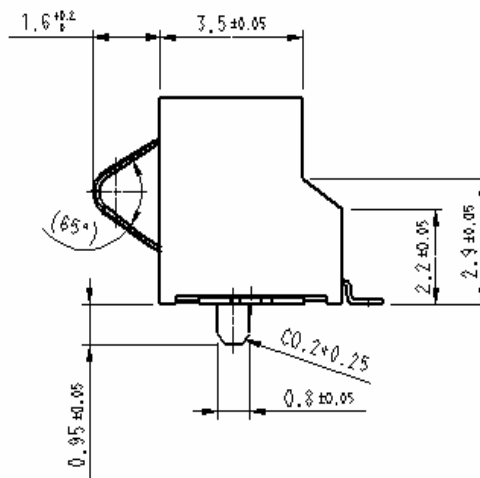
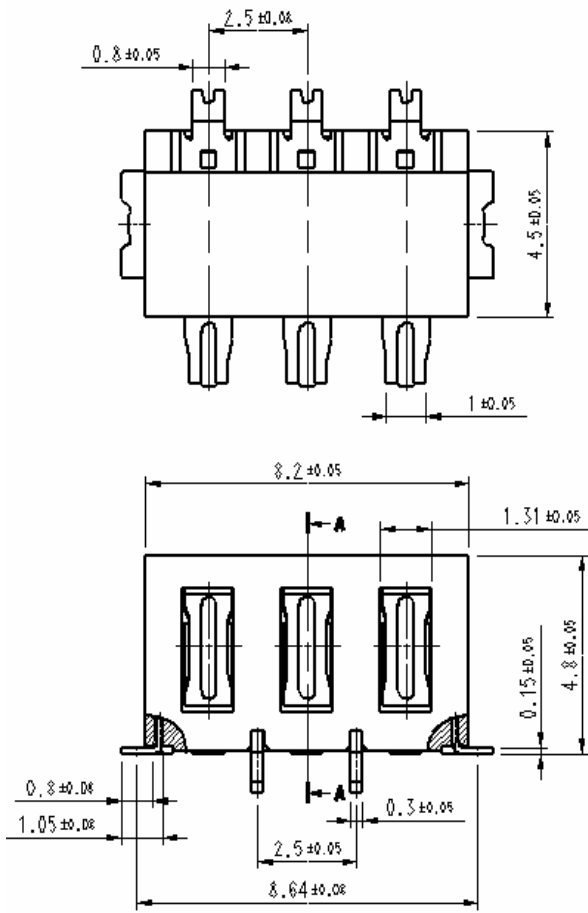


STROKE STATE OF BATTERY CONTACT

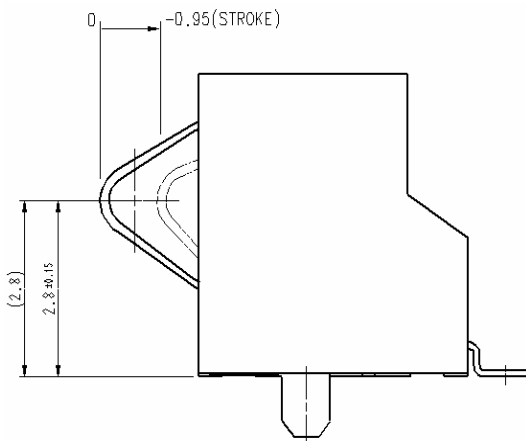


Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0122-0	KQ03SB1-4R	4	Emboss Tape	1,000ea/Reel

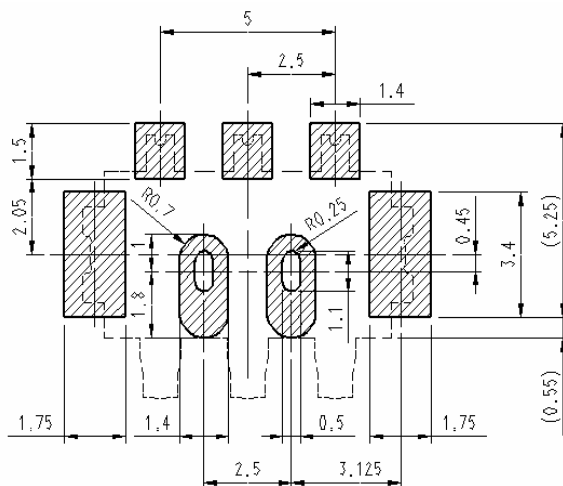
■ KQ03SL-3R



PCB PATTERN

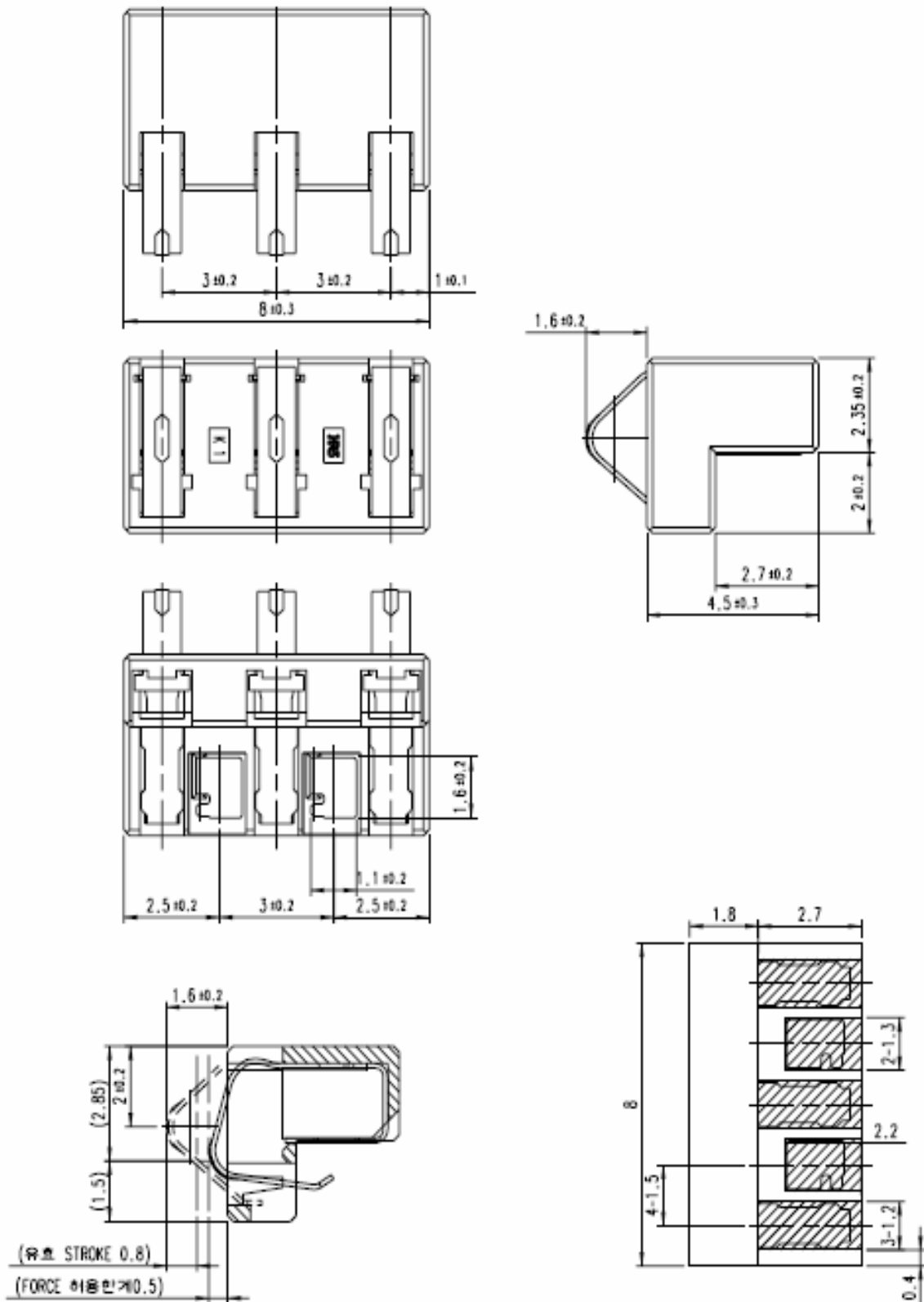


STROKE STATE OF BATTERY CONTACT



Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0132-0	KQ03SL-3R	3	Emboss Tape	1,000ea/Reel

■ **KQ03LD-3R**

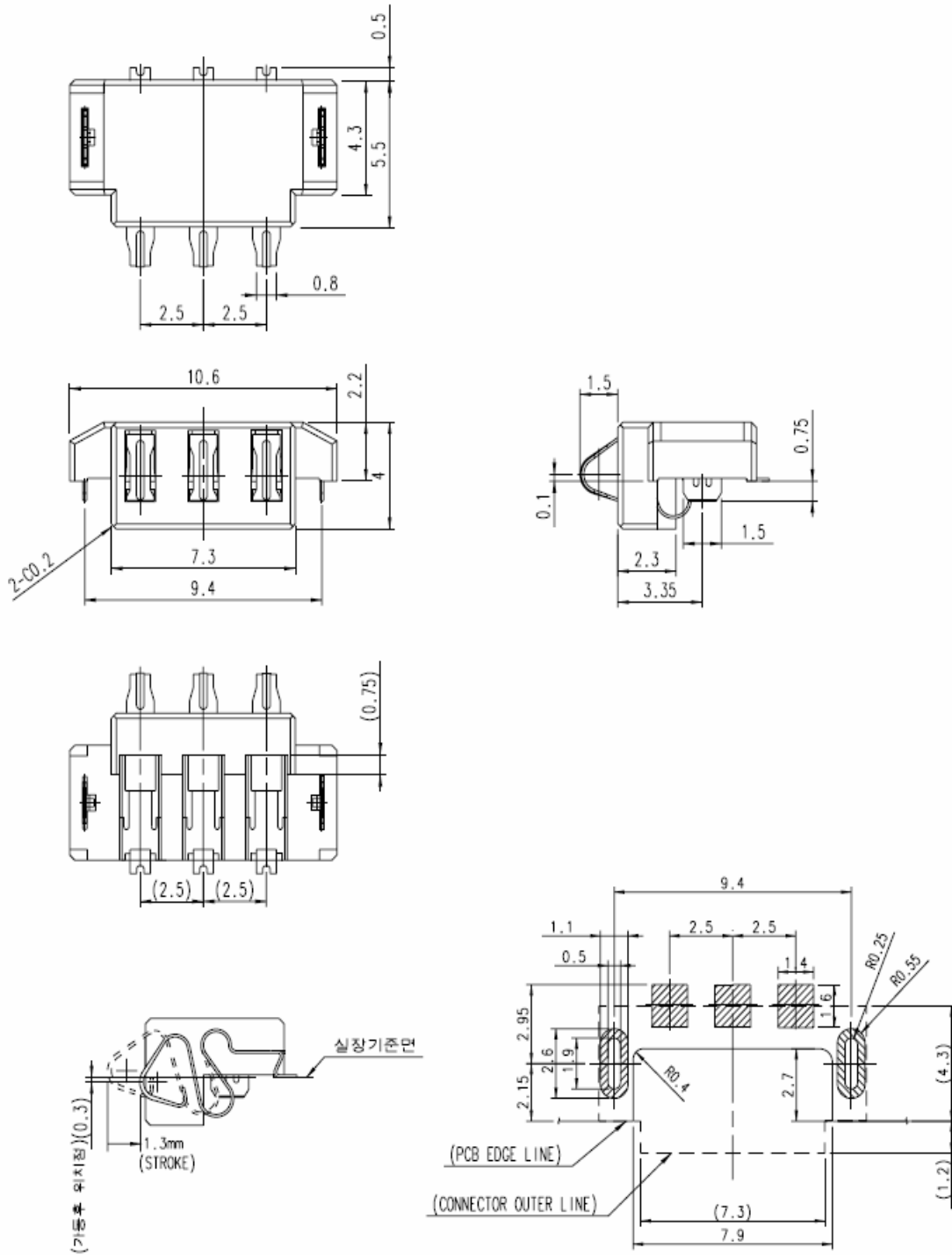


STROKE STATE OF BATTERY CONTACT

RECOMMENDED PCB PATTERN

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0126-8	KQ03LD-3R	3	Emboss Tape	1,000ea/Reel

■ KQ03LE-3R

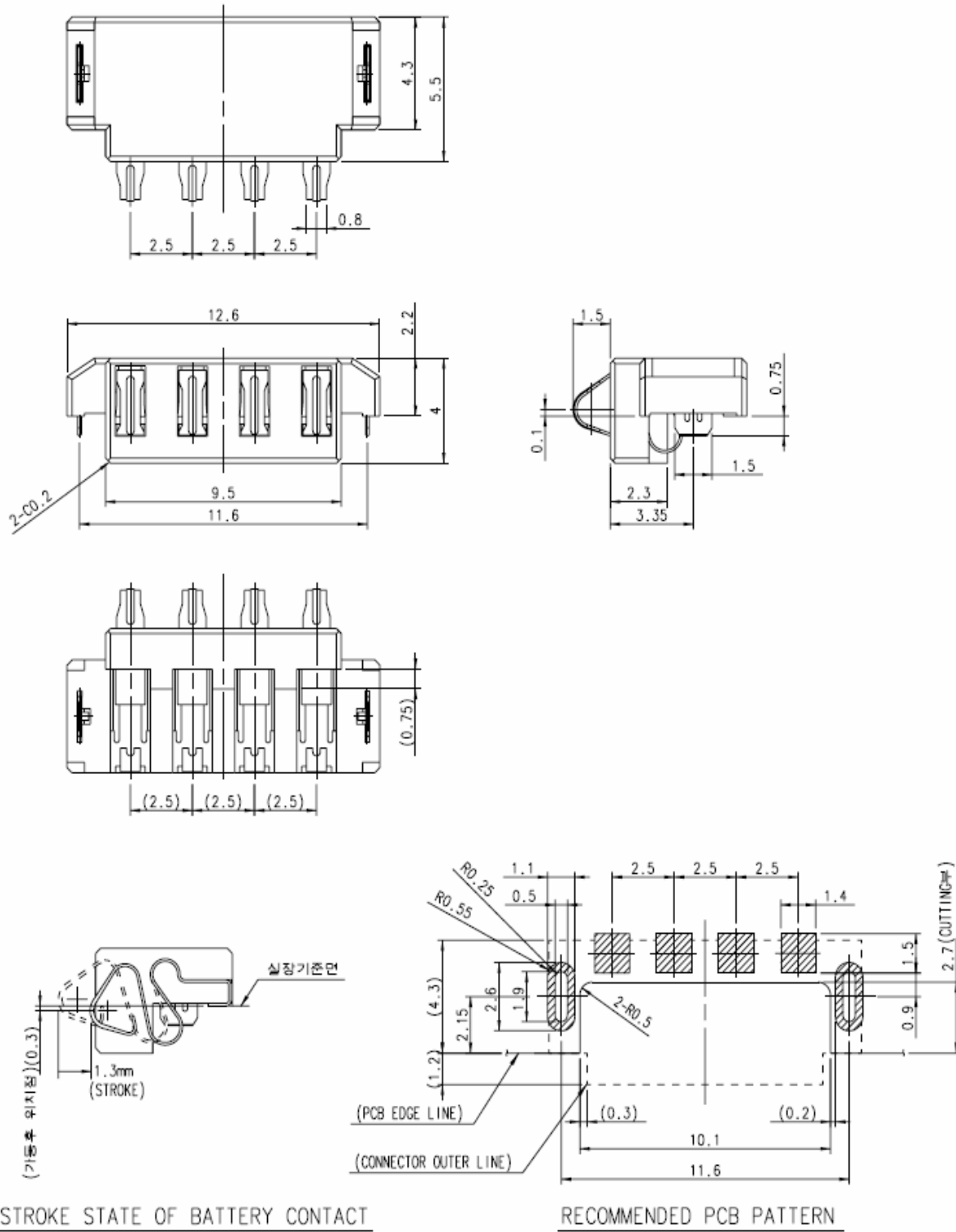


STROKE STATE OF BATTERY CONTACT

RECOMMENDED PCB PATTERN

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0133-6	KQ03LE-3R	3	Emboss Tape	1,500ea/Reel

■ KQ03LE-4R

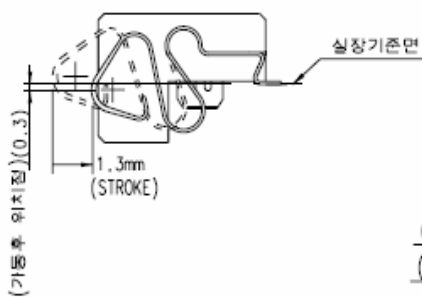
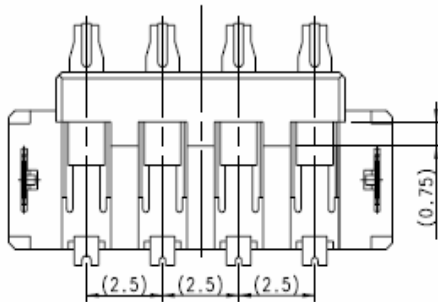
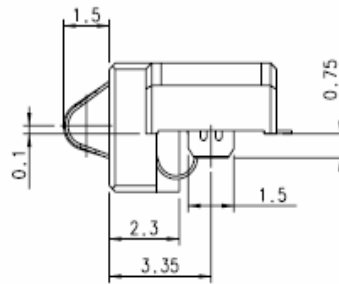
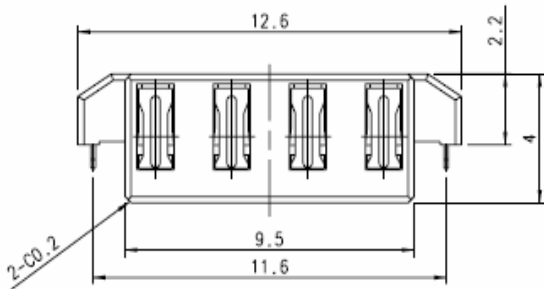
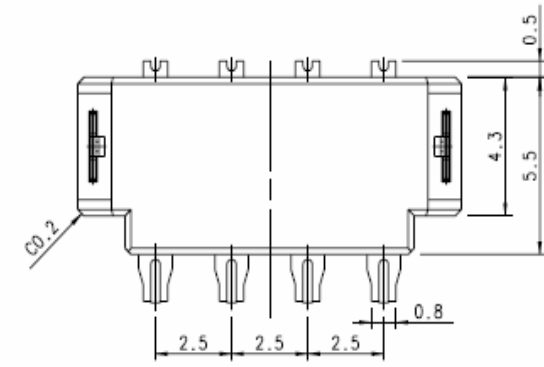


STROKE STATE OF BATTERY CONTACT

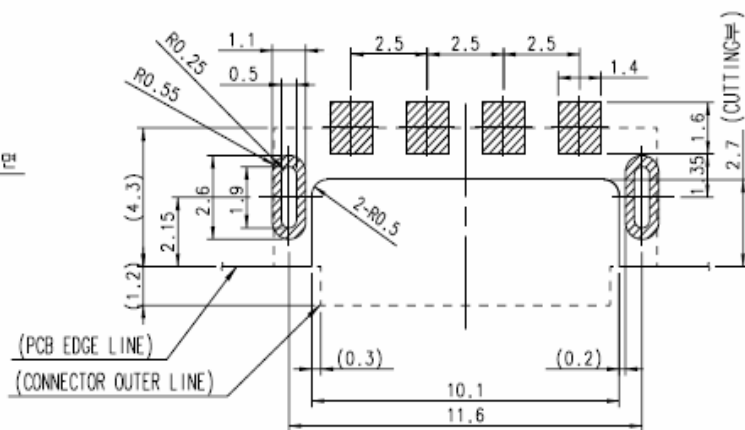
RECOMMENDED PCB PATTERN

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0130-5	KQ03LE-4R	4	Emboss Tape	1,500ea/Reel

■ KQ03LE-4R(S)



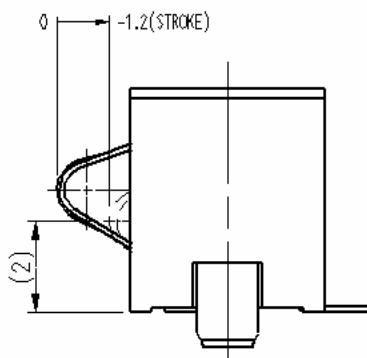
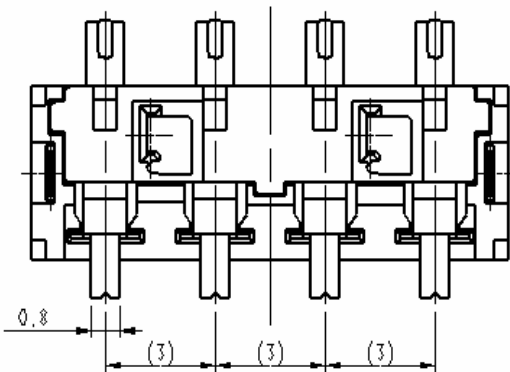
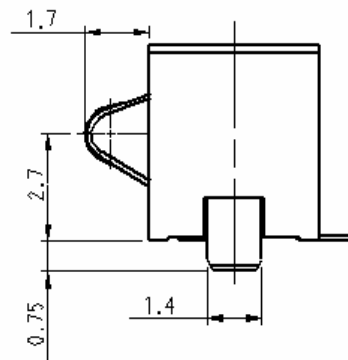
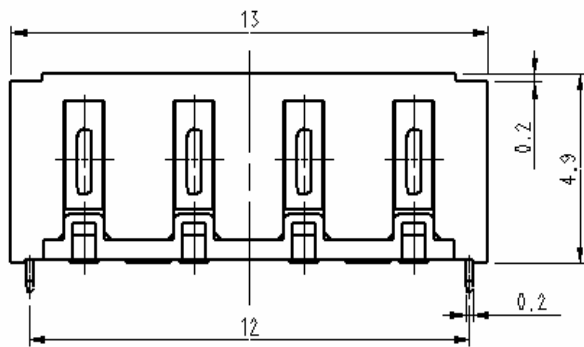
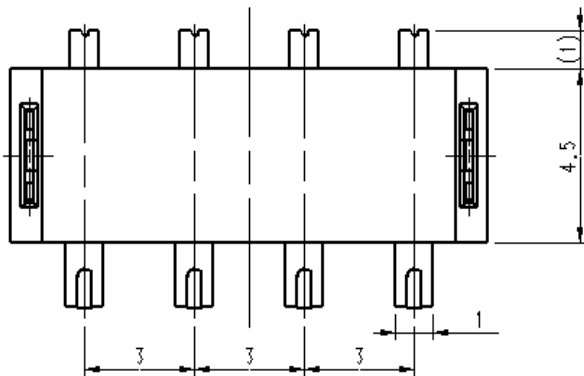
STROKE STATE OF BATTERY CONTACT



RECOMMENDED PCB PATTERN

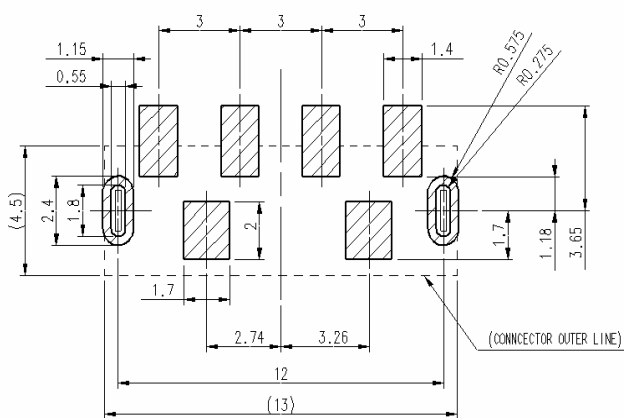
Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0134-6	KQ03LE-4R(S)	4	Emboss Tape	1,500ea/Reel

■ **KQ03LH-4R**



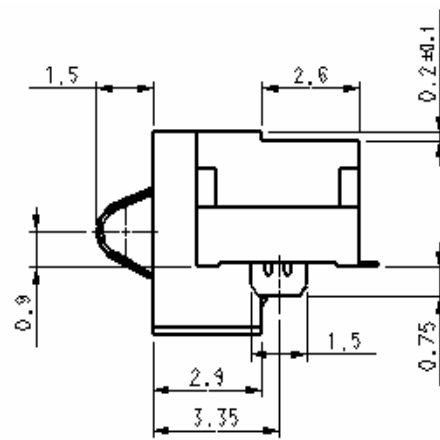
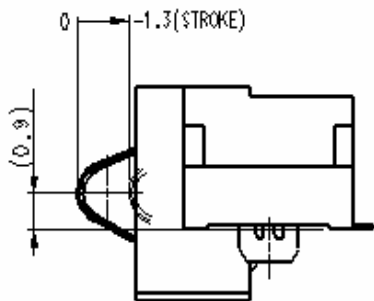
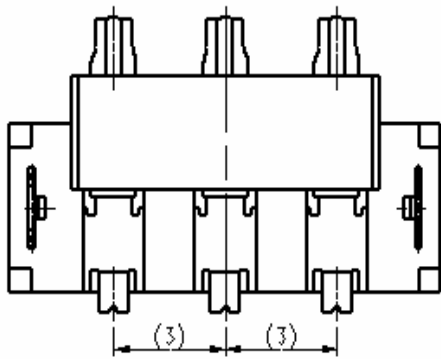
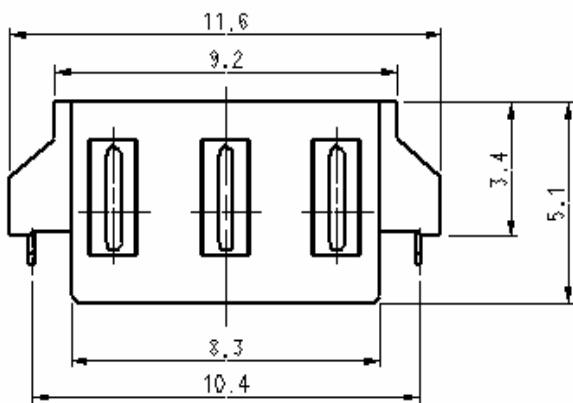
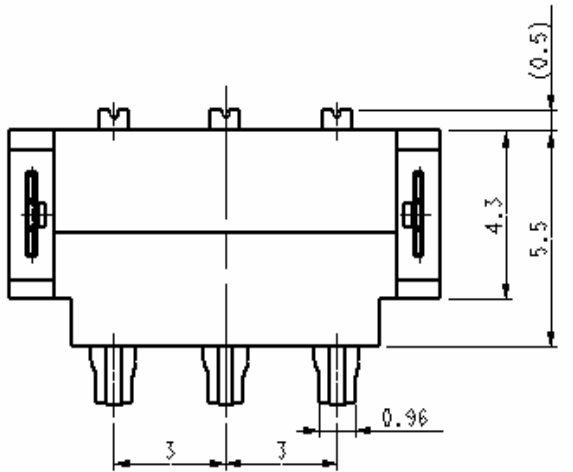
STROKE STATE OF BATTERY CONTACT

PCB PATTERN

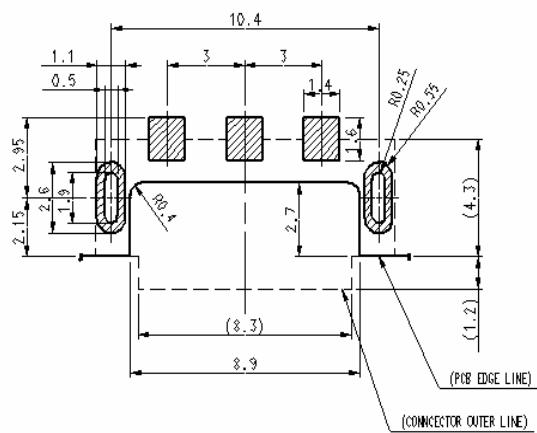


Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0131-8	KQ03LH-4R	4	Emboss Tape	1,000ea/Reel

■ KQ03LJ-3R(11)



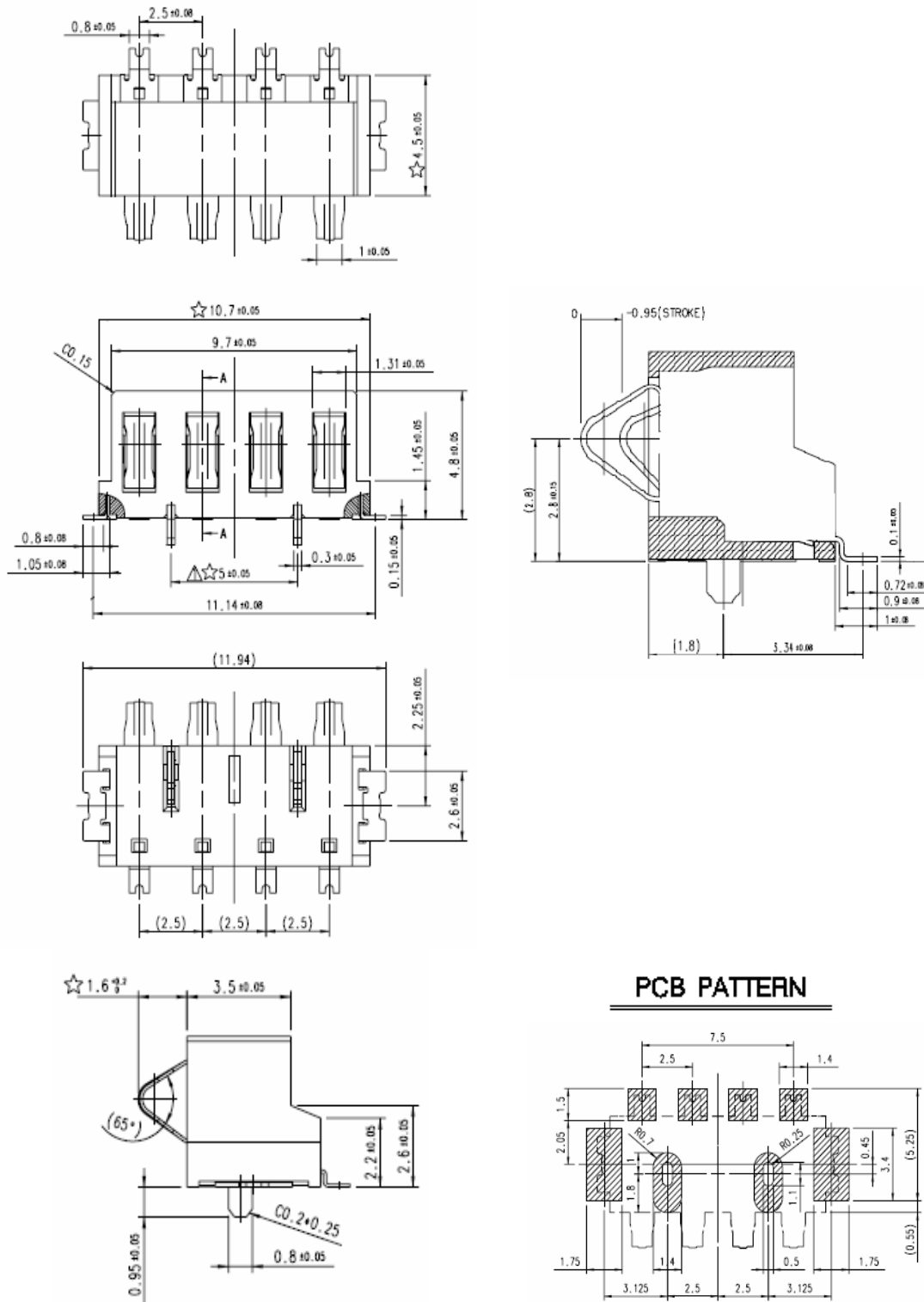
PCB PATTERN



STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0136-1	KQ03LJ-3R(11)	3	Emboss Tape	1,000ea/Reel

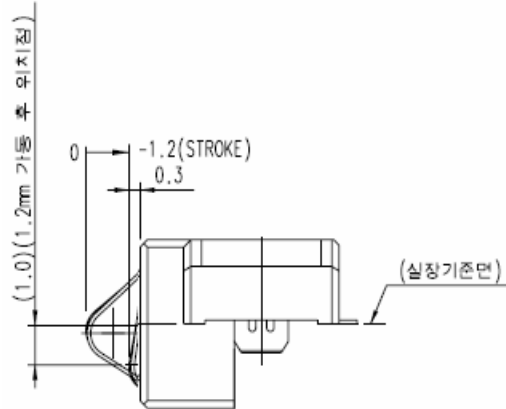
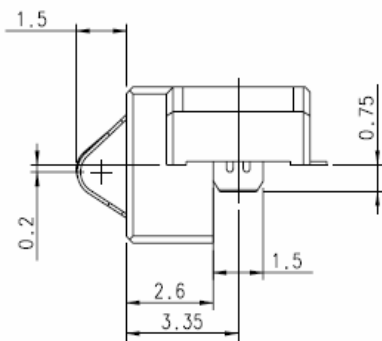
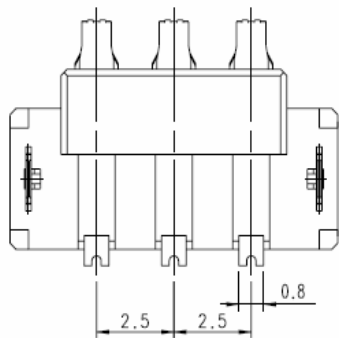
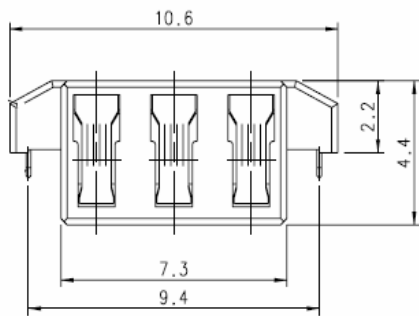
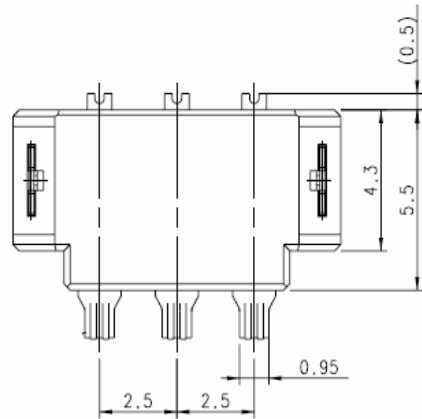
■ KQ03SL-4R



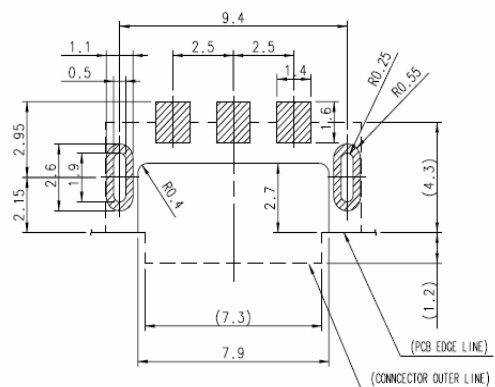
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0148-0	KQ03SL-4R	4	Emboss Tape	1,000ea/Reel

■ KQ03LP-3R



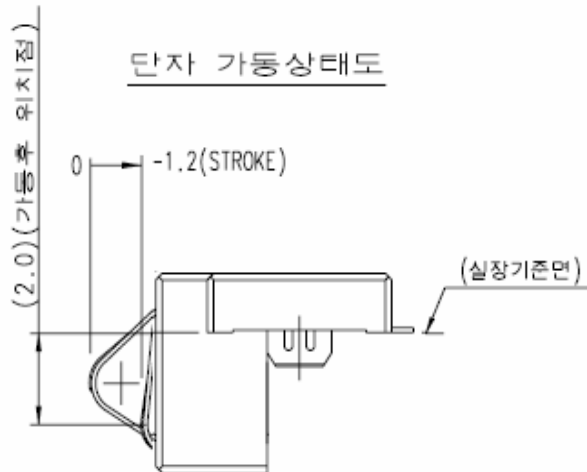
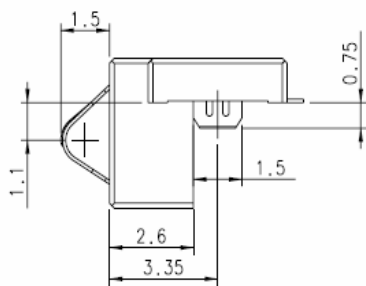
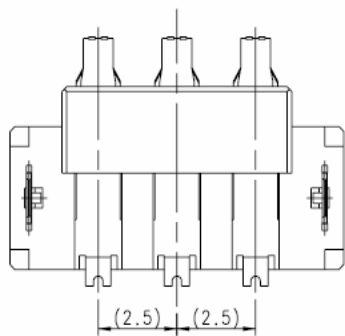
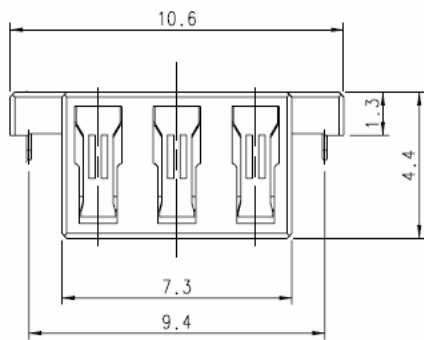
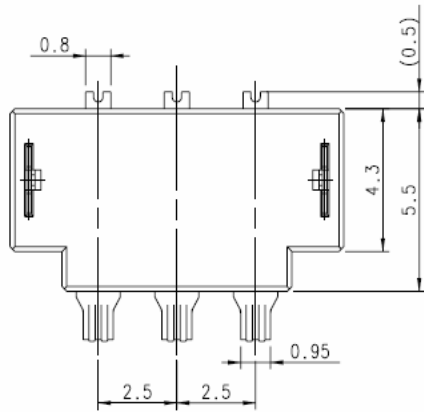
PCB PATTERN



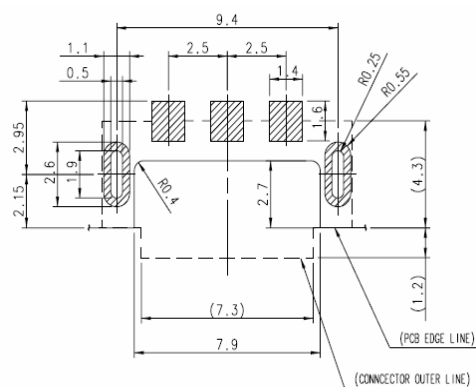
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0163-4	KQ03LP-3R	3	Emboss Tape	1,500ea/Reel

■ KQ03LP1-3R



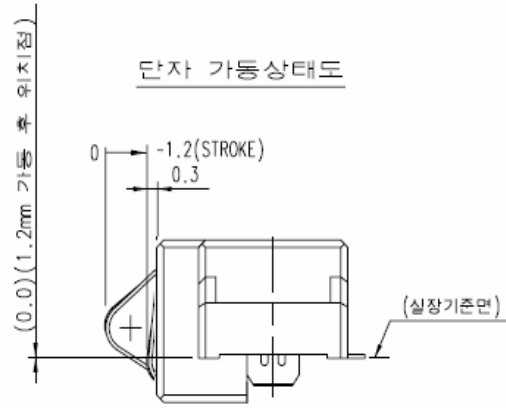
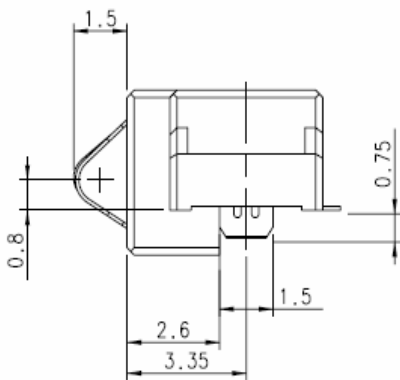
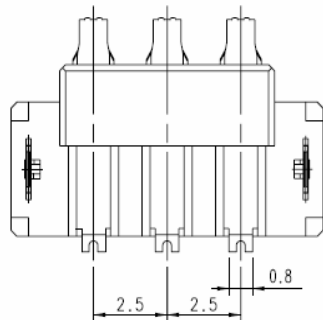
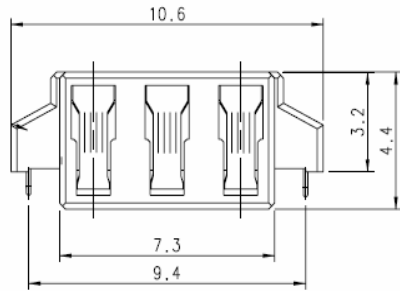
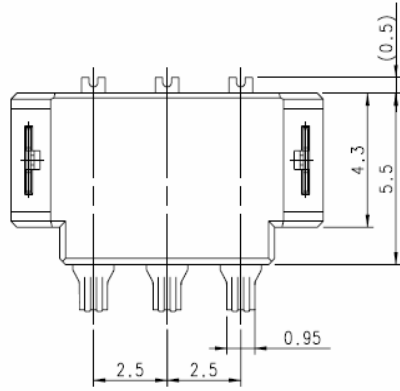
PCB PATTERN



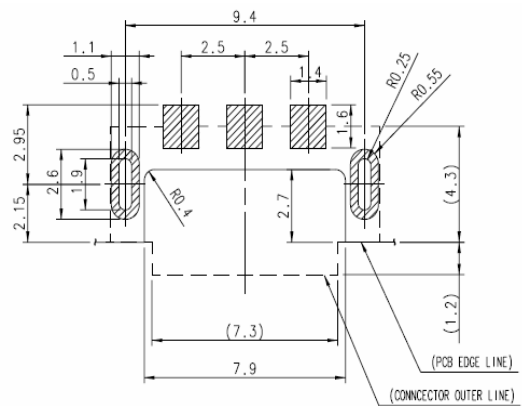
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0168-8	KQ03LP1-3R	3	Emboss Tape	1,500ea/Reel

■ KQ03LP2-3R



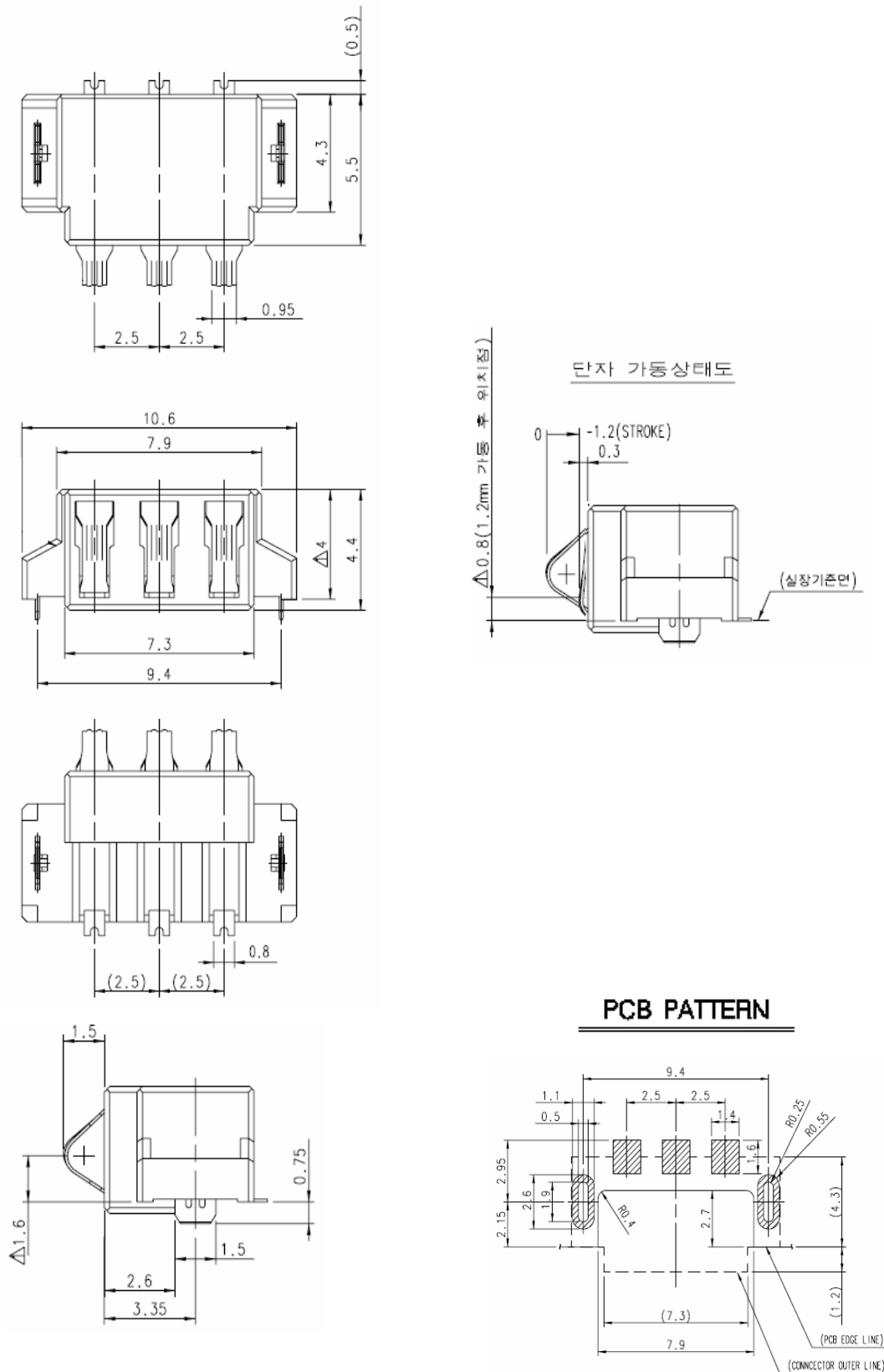
PCB PATTERN



STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0166-2	KQ03LP2-3R	3	Emboss Tape	1,500ea/Reel

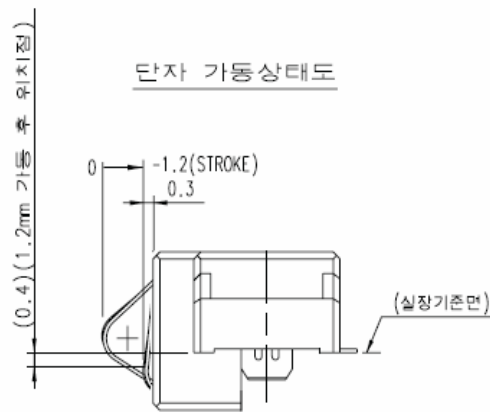
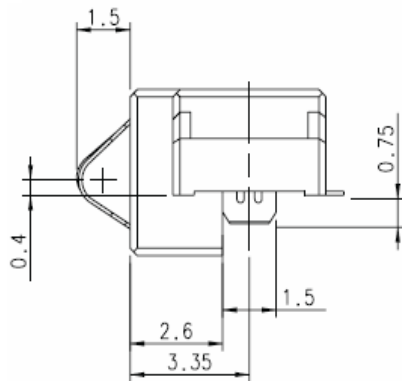
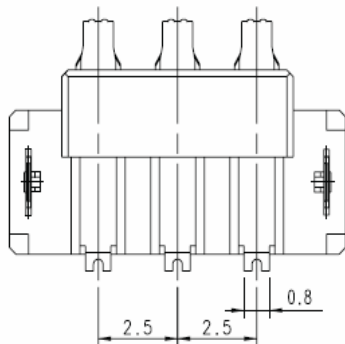
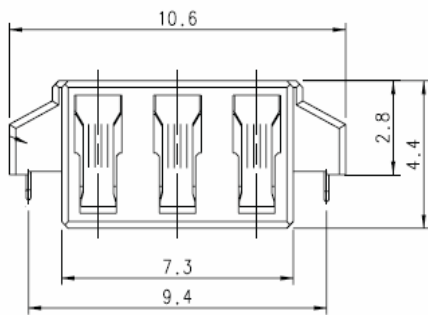
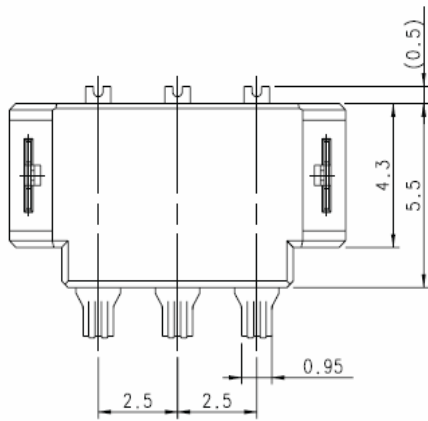
■ KQ03LP3-3R



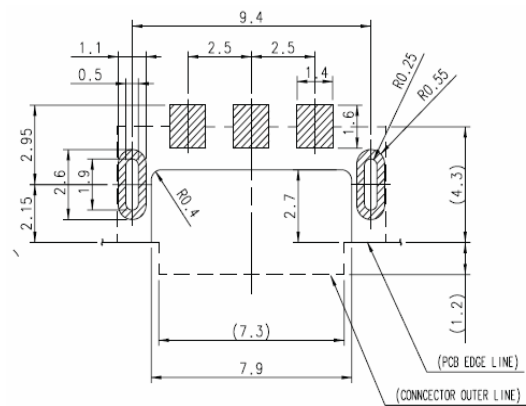
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0168-8	KQ03LP3-3R	3	Emboss Tape	1,500ea/Reel

■ KQ03LP4-3R



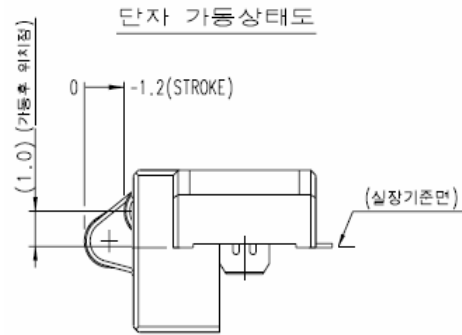
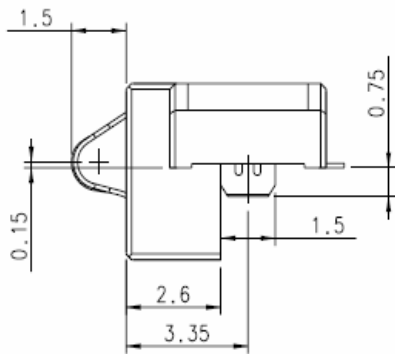
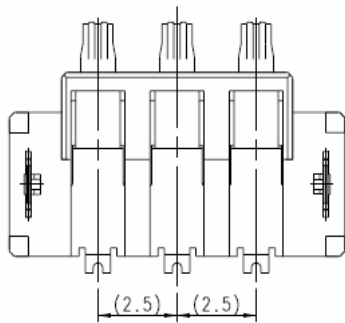
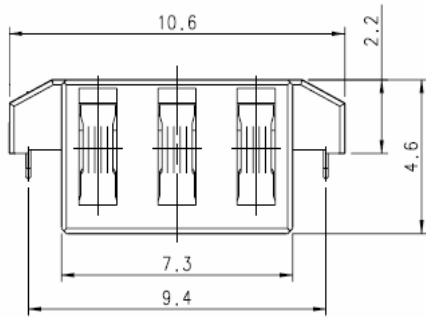
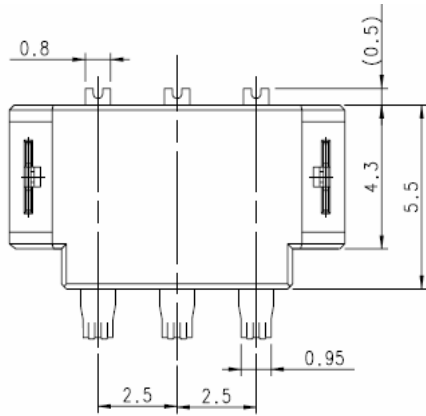
PCB PATTERN



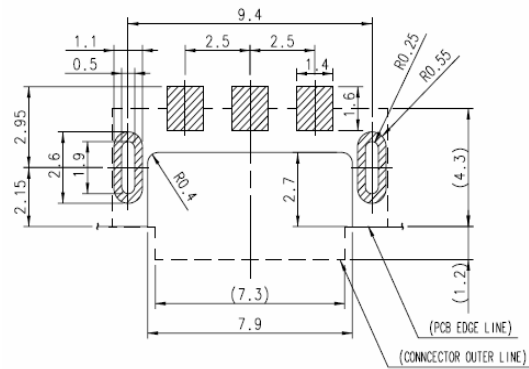
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0177-9	KQ03LP4-3R	3	Emboss Tape	1,500ea/Reel

■ KQ03LQ-3R



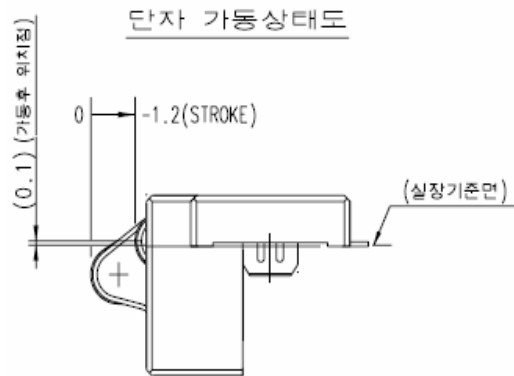
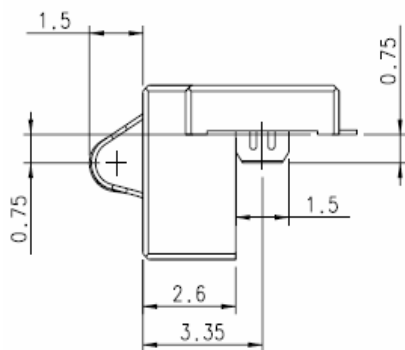
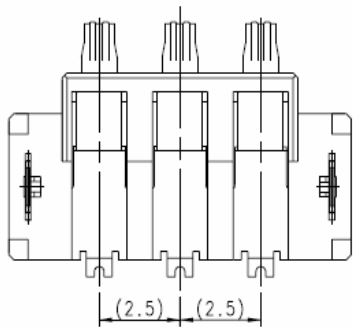
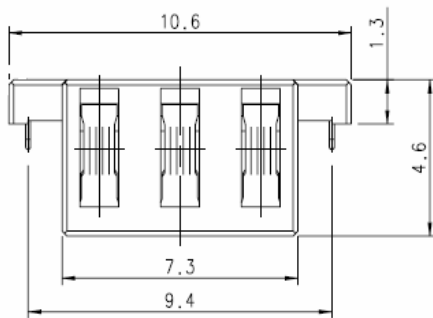
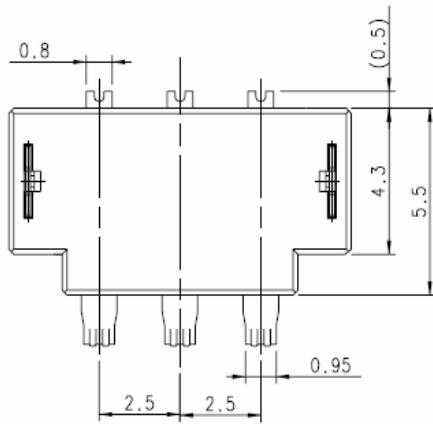
PCB PATTERN



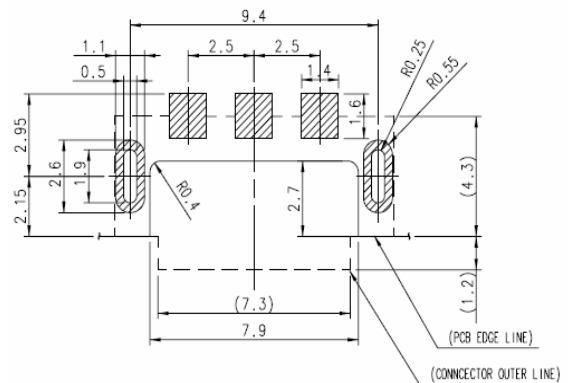
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0164-7	KQ03LQ-3R	3	Emboss Tape	1,000ea/Reel

■ **KQ03LQ1-3R**



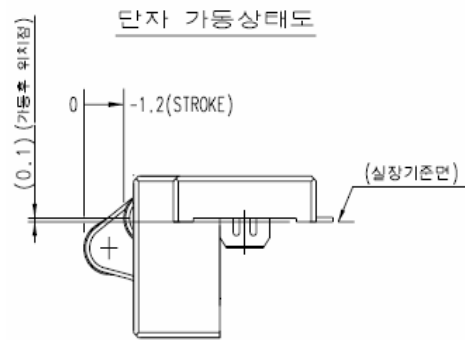
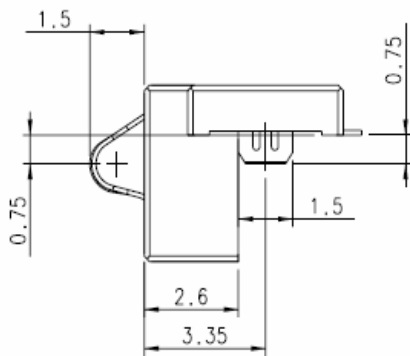
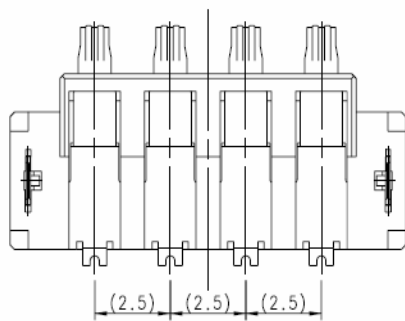
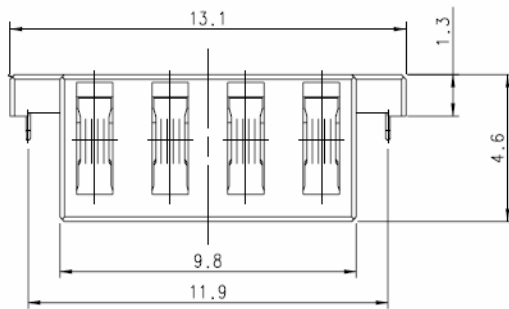
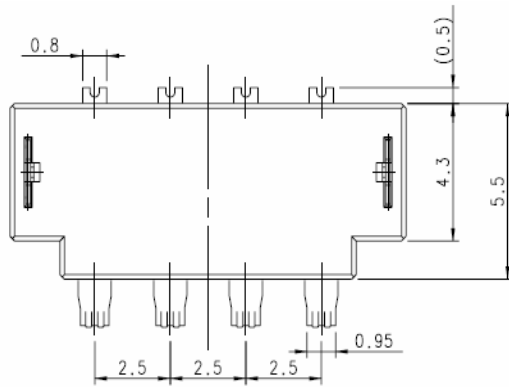
PCB PATTERN



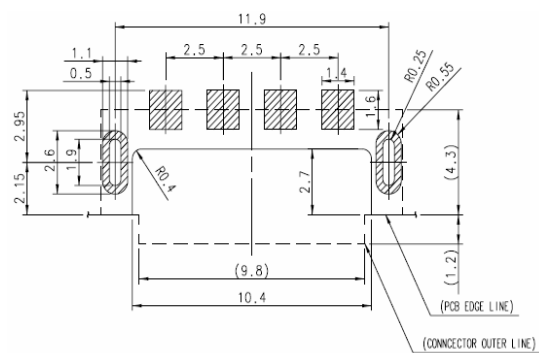
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0165-0	KQ03LQ1-3R	3	Emboss Tape	1,000ea/Reel

■ KQ03LQ1-4R



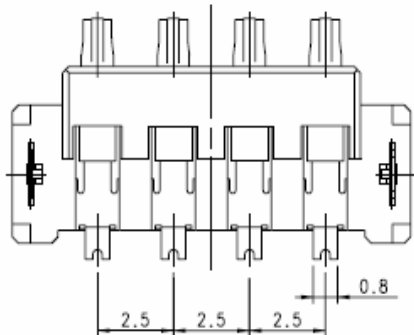
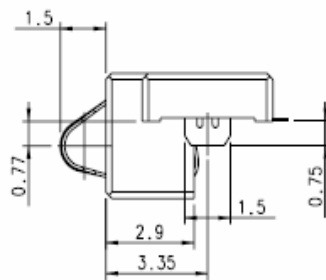
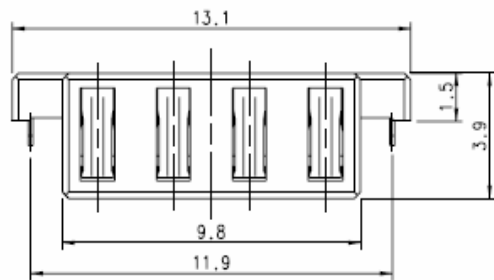
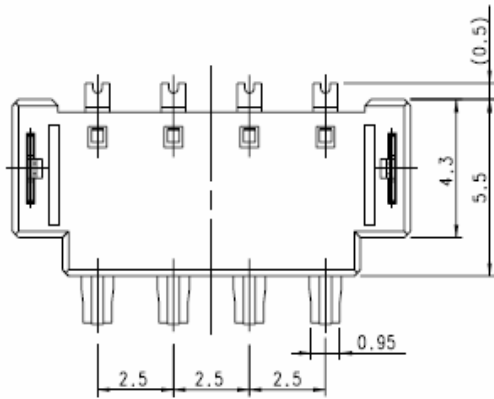
PCB PATTERN



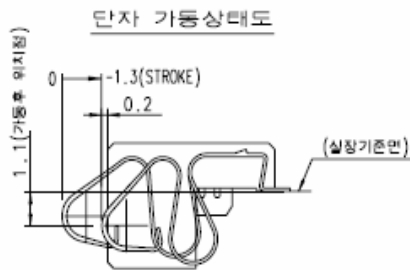
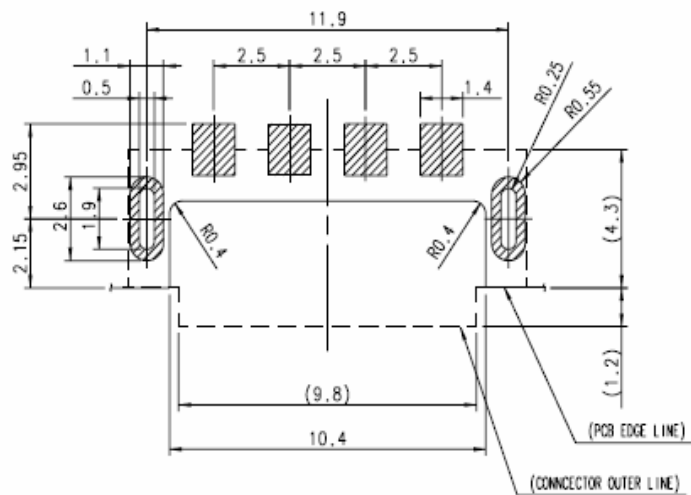
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0171-2	KQ03LQ1-4R	4	Emboss Tape	1,000ea/Reel

■ KQ03LK-4R



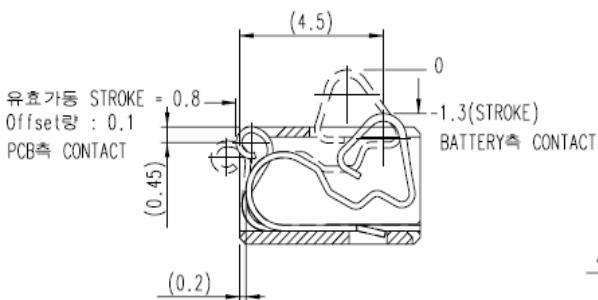
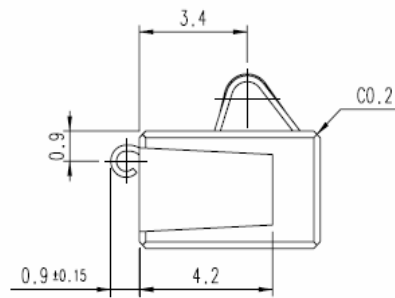
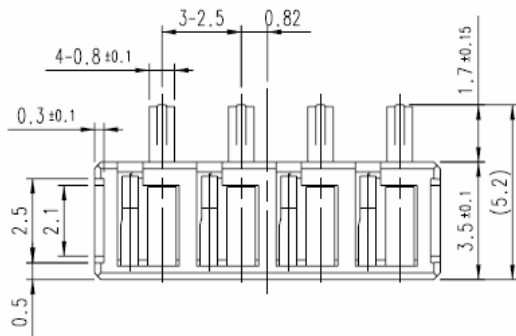
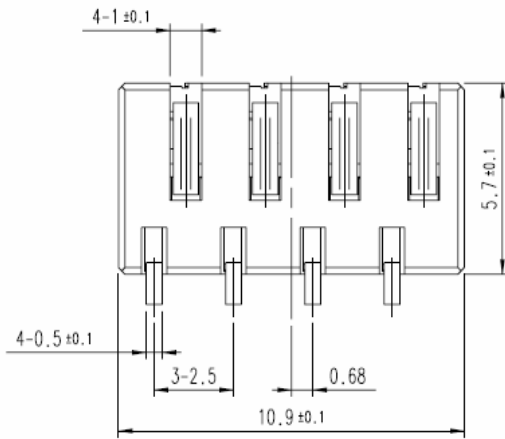
RECOMMENDED PCB LAYOUT (TOLERANCE : ±0.05)



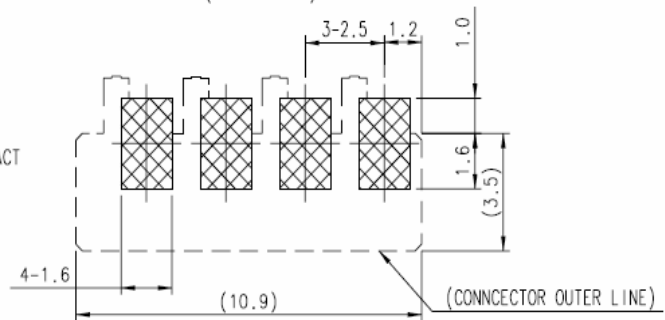
STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0161-9	KQ03LK-4R	4	Emboss Tape	1,500ea/Reel

■ KQ03LC2-2.5P-4R



RECOMMENDED PATTERN FOR MATING
(TOP-VIEW)

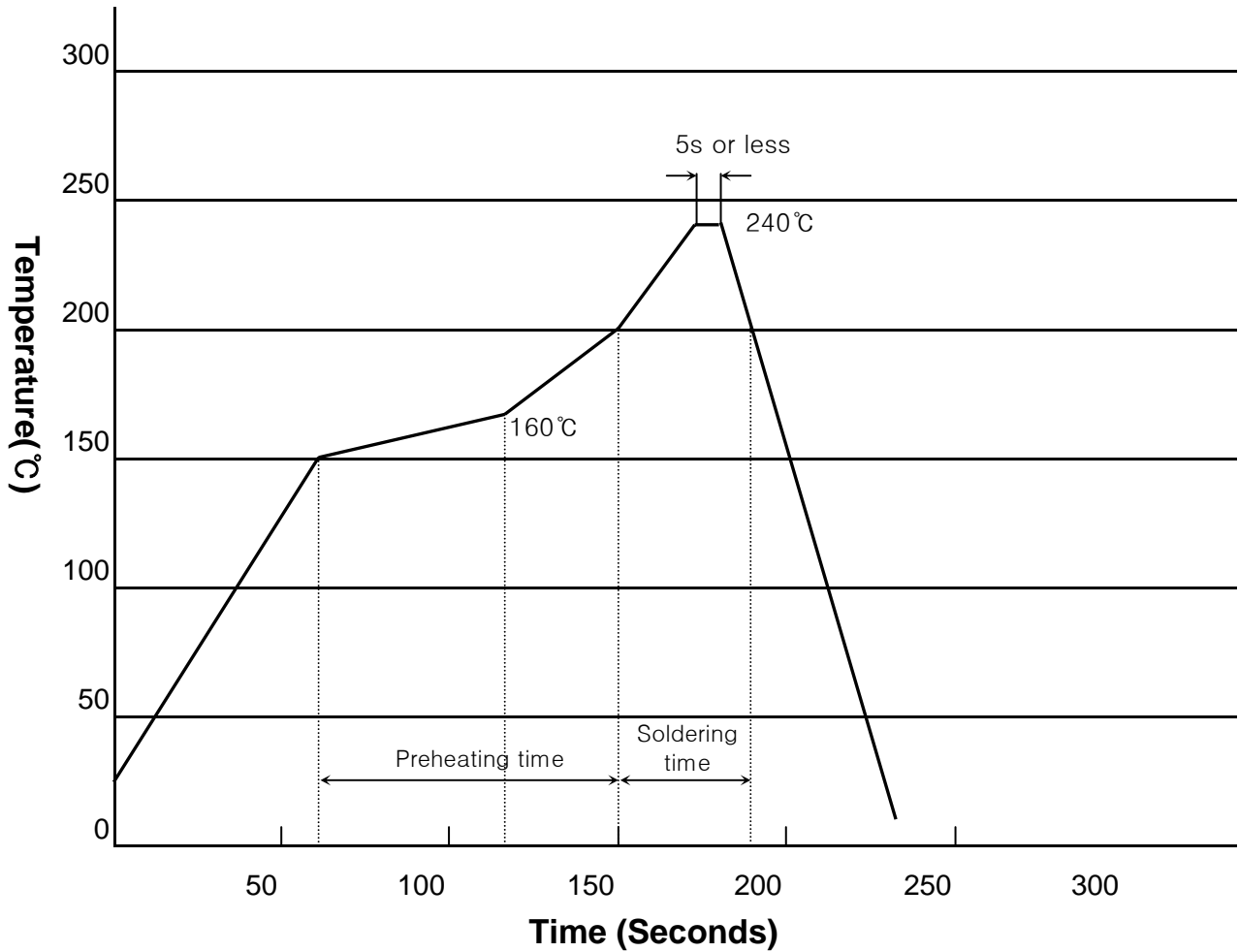


STROKE STATE OF BATTERY CONTACT

Hirose Part No.	Product Name	Contact	Package	Remark
CL 6226-0147-8	KQ03LC2-2.5P-4R	4	TRAY	4000EA/BOX

■ Reflow Profile

Using Conventional Solder Paste



Recommended Application Conditions

Reflow System: IR reflow

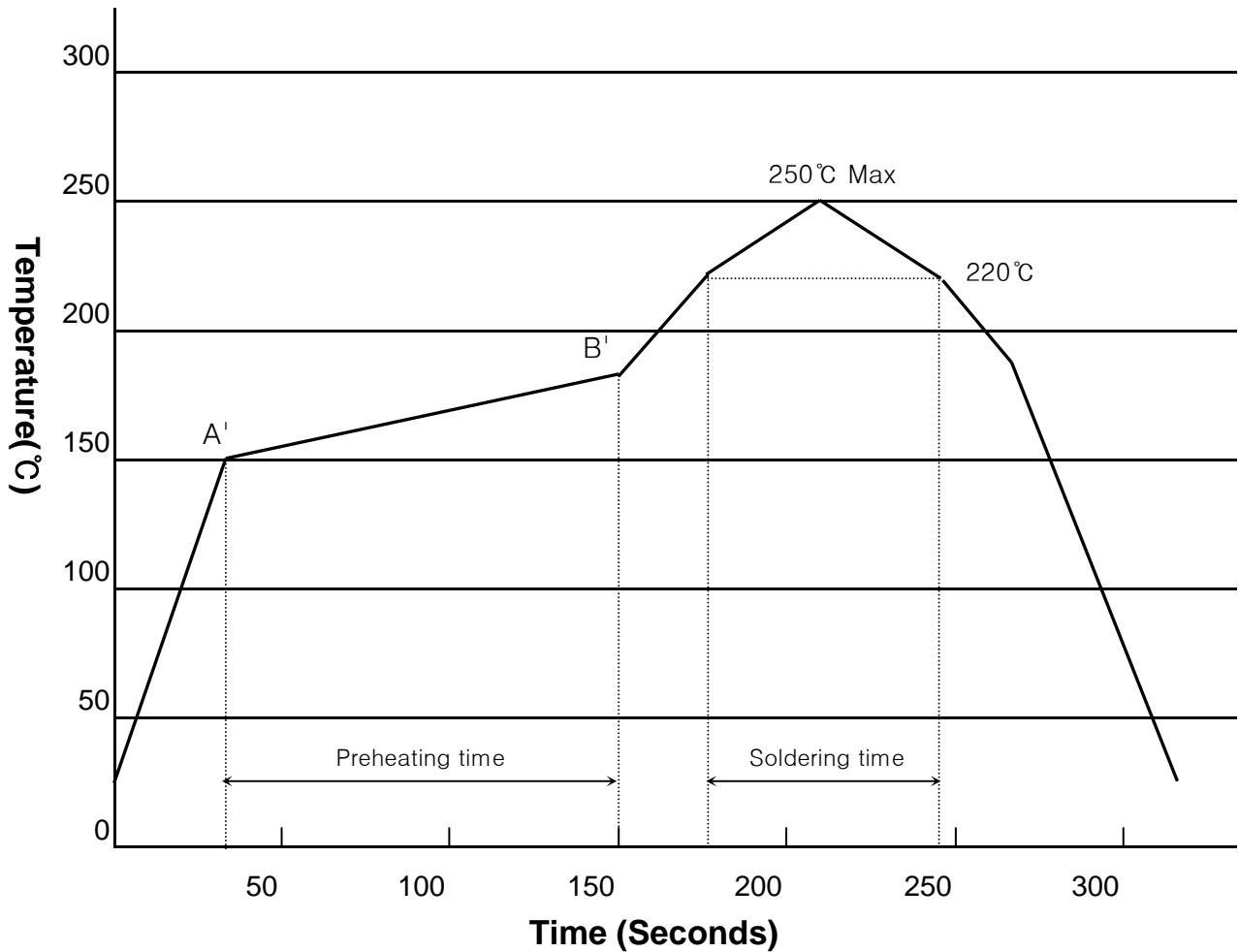
Solder: Cream type 63 Sn / 37 Pb

Flux content 11%wt

Metal mask thickness: 0.12mm

■ Reflow Profile

Using Lead-free Solder Paste



Recommended Application Conditions

Reflow System: IR reflow

Solder: Cream type Sn / 3 Ag / 0.5 Cu

Flux content 11%wt

Metal mask thickness: 0.12mm

Preheating time: 150°C~190°C, 90±30seconds

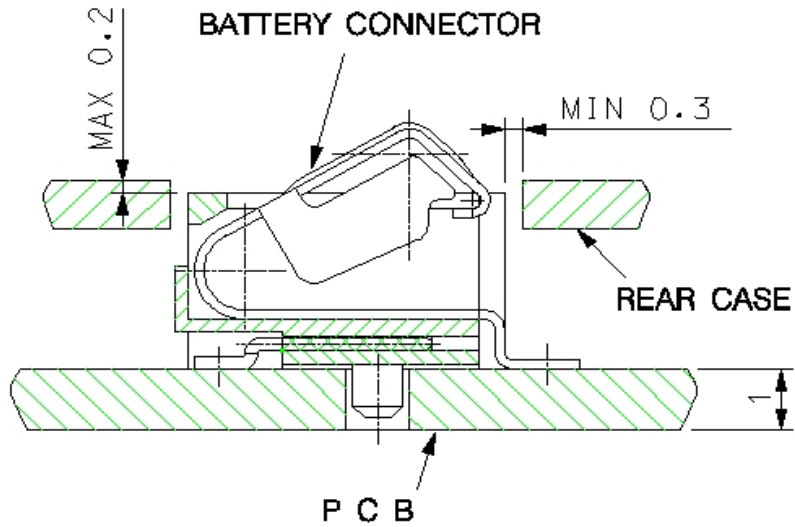
A'=150°C~170°C, B'=170°C~190°C

Soldering time: 250°C Max

220°C Min, 30~60 seconds

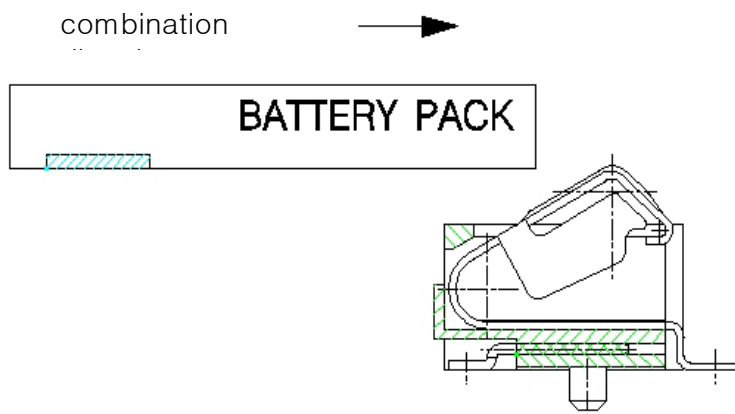
Application example of battery connector

1. Appliance design

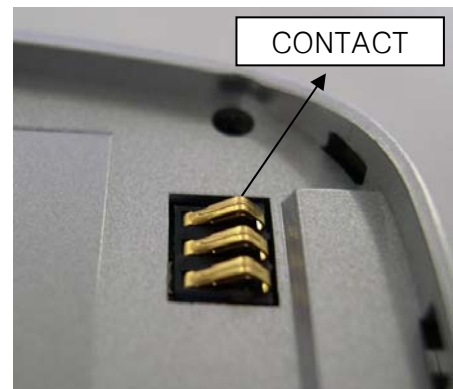
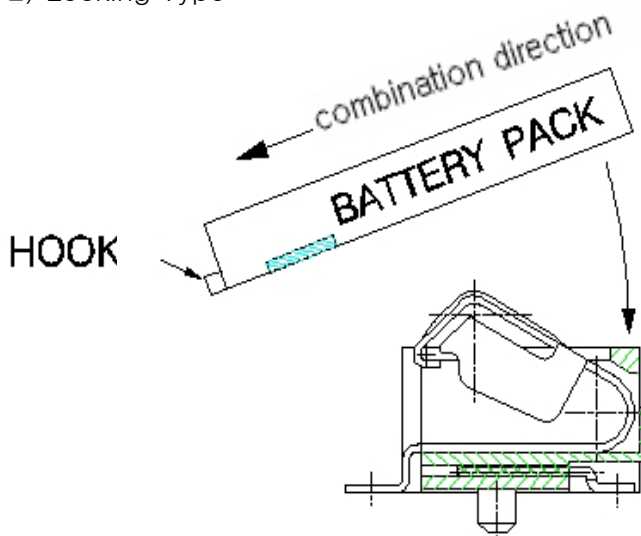


2. Recommended mounting method

1) Sliding Type



2) Locking Type



Application example