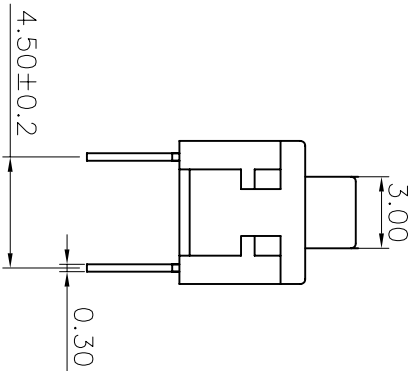
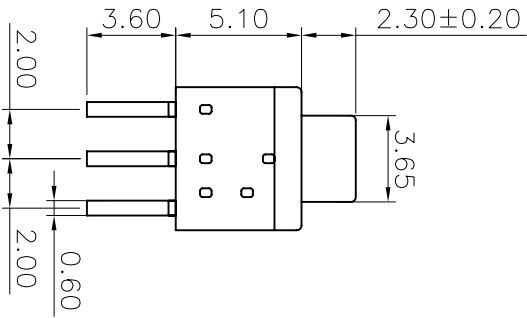
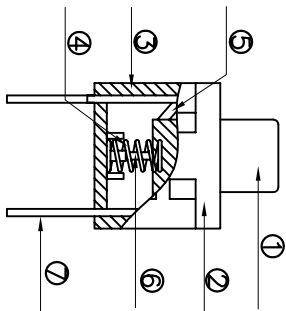
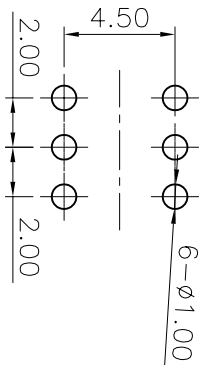
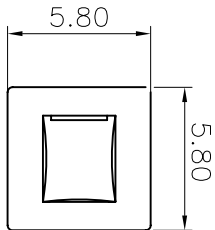
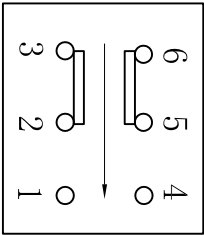
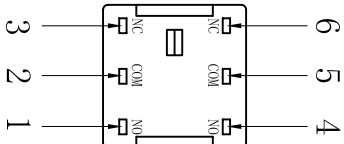




Specification :

1. Rating : DC12V 50mA
2. Contact Resistance : 200mΩ Max
3. Insulation Resistance : 100MΩ Min
4. Withstand Voltage :
- AC250V (50-60Hz) For 1 Minute
5. Operation Force : 250±50gf
6. Life Test : 10,000 Cycles
7. Total Travel : 2.0±0.2 mm
8. Work Style : Self-Lock



Circuit Diagram

⑦	Terminal	5	Brass	Plating silver	
⑥	Hookpin	1	Stainless Steel		
⑤	Contact	1	Copper Silver	Plating silver	
④	Spring	1	SWC		
③	Base	1	PAG6	Gray	
②	COVER	1	PAG6	Black	
①	keystoke	1	PAG6	White	
APPROVALS		DATE			
DRAWN	Zhong,Huijun	2018.01.17			
CHECKED					
APPROVALS					
TOLERANCES ARE		30±1% ±0.30	ANGLE	5.8自锁p短白号	
		10~30 ±0.20	UNIT: mm	SCALE: 2:1	PROJ. 1 OF 1
		5~10 ±0.15	±2°	DRAWING NO.	
		~ 5 ±0.10			

ECN NO.	REV.	DATE.	DESCRIPTION.	CHANGE.	CHECK.	APPRO.
	A		NEW			

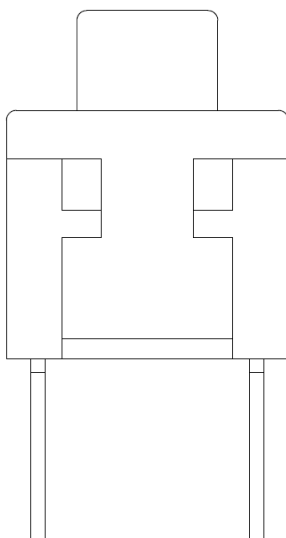


凱華電子
KAIHUA EEELETRONICS

Document Number:

KH-PS1807- 03

Product Specification



P/N: _____

CPG 5851 10D 07

Title :

Push Button Switch

Rev.	ECN	Release and	PreparedBy/Date:	Checked By/Date:	Approved By/Date:
A	-----	New releasing Revision	/2018/07/ 10	/2018/07/ 10	/2018/07/ 10
		Description:			



1. Scope/ :

This Product Specification covers the requirement of Push button switch on product performance, test methods and quality assurance provisions.

2. Product Application/

The Switch is applied in all types of Computer. Please let us know before using any of the products in the application not described above.

3. Technology Parameters/

Ambient Humidity	45~85% R.H.
Operating Temperature Range	
-10 +70	
Storage Temperature Range	
-20 +70	
Ambient temperature	20± 5
Normal Relative humidity	65%± 5% R.H.
Air pressure	86~101KPa;
Contact Resistance	200 m Max
Operation Force	250± 50gf
Solder Ability :	260± 5 ,3± 0.5s
Withstand Soldering Temperature :	260± 5 ,3± 0.5s

4. Ratings/

Rating	DC12V / 50mA
InsulationResistance	100M /AC 250V;
Withstand Voltage	250V AC 1 Minute;
Mechanical Life	10,000 Cycles

5. Profile Dimensions /



6. Electrical Performance/

Item	Description	Test Condition	Requirement
6.1	Contact Resistance	Static load: (Operation force)x2, which is applied on the center of Switch stem. 2 Measurement tool: Contact resistance Meter. (1KHz, 20mV,5~50mA) 100mA Measured at low current (100mA or less).	200m Max 200m
6.2	Insulation Resistance	Apply a Voltage of AC 250 V for 1 minute, according to the below method. (1) Between terminals. (2) Between terminal and Body. 250V AC 1 (1) . (2) .	100M Min 100
6.3	Dielectric withstanding voltage	Apply a Voltage of AC 250 V (50~60Hz) for 1 minute, according to the below method. (1) Between terminals. (2) Between terminal and Body. 250V AC 1 (1) . (2) .	No evidence of breakdown
6.4	Bouncing	Operation speed 1 times/s 1 Slightly push the center of stem by 1 times/s, to test the bounce at “ON” and “OFF” 1 ” ” ” Oscillo scope Switch Bouncing Test Circuit	Before Life cycle: On:5ms MAX,5 Off: 5ms MAX,5 After Life cycle: On:10ms MAX,10 Off: 10ms MAX,10



凱華電子
KAIHUA EEELETRONICS

Product Specification

P/N:

CPG585110D07

DOC. No.:

KH-PS1807-03

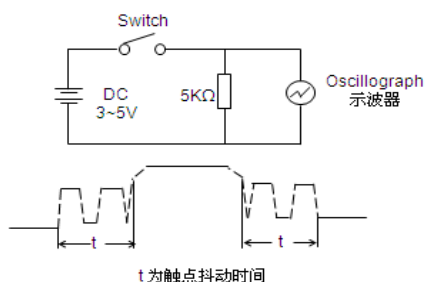
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Page:

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触点抖动用图：



7. Mechanical Performance/

Item	Description	Test Condition	Requirement
7.1	Operation force	Operate the keystroke of the switch and then increase press strength gradually, Measured maximum operation force while the travel of the switch is full.	250±50gf
7.2	Travel	Operate the keystroke of the switch vertically, the travel distance of keystroke moving from its free position to maximum moving distance shall be measurement.	Total travel: 2.0±0.2mm

“ Confidential ”

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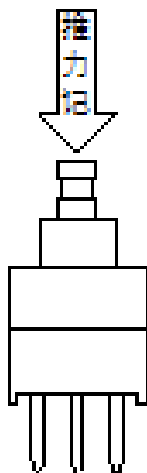


7.3

Static
Strength

A static load of 1 Kgf shall be applied in the direction of button operation for a period of 60 seconds.

1kgf 60 ,



No damage (Electrical
And mechanical

7.4

Stem Pull
Strength

Break by a pull force applied opposite to the direction of stem operation.

500gf Min

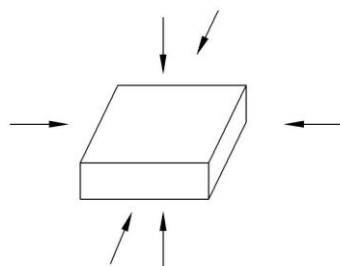
7.5

Shock

Measured by according to the below condition:

(1) Acceleration: 80g
(2) Cycles of test: 3 cycles each in 6 directions, for a total of 18 cycles.

3 6 18



Shall meet No.6 7.1 7.2.
6 7.1 7.2 .



7.6	Life Test	(1) Weight:250gf 250gf (2) Operation speed 1cycles/s 1 / (3) Push force Maximum value of operation force. (4) Cycles 10,000 times Min 1	Contact resistance: 10000 m Max 10000 Bouncing 10ms Max 10 Operation force Variation rate within $\pm 30\%$ $\pm 30\%$
-----	-----------	---	--

8. Environmenta I Performance/

Item	Description	Test Condition	Requirement												
8.1	Cold test	(1) Temperature : - 20± 2 - 20± 2 (2) Duration of test: 96h 96 (3) Take off a drop water (4) Standard conditions after test : 1h 1	Contact resistance: 200m Max Shall meet : No. 6.2 to 6.4 No. 7.1 to 7.2 200m : No. 6.2 to 6.4 No. 7.1 to 7.2												
8.2	Heat test	(1) Temperature : 80± 2 80± 2 (2) Duration of test: 96h 96 (3) Take off a drop water (4) Standard conditions after test : 1h 1	Contact resistance: 200m Max Shall meet : No. 6.2 to 6.4 No. 7.1 to 7.2 200m : No. 6.2 to 6.4 No. 7.1 to 7.2												
8.3	Temperature cycle	(1) Test cycles: 5 cycles 5 (2) Standard condition after test:1h 1 <table><tr><td></td><td>Temperature</td><td>Duration of test</td></tr><tr><td rowspan="4">1 cycle</td><td>20± 5</td><td>1h</td></tr><tr><td>-20± 2</td><td>1h</td></tr><tr><td>20± 5</td><td>1h</td></tr><tr><td>70± 5</td><td>1h</td></tr></table>		Temperature	Duration of test	1 cycle	20± 5	1h	-20± 2	1h	20± 5	1h	70± 5	1h	Contact resistance: 200m Max Shall meet : No. 6.2 to 6.4 No. 7.1 to 7.2 200m : No. 6.2 to 6.4 No. 7.1 to 7.2
	Temperature	Duration of test													
1 cycle	20± 5	1h													
	-20± 2	1h													
	20± 5	1h													
	70± 5	1h													



8.4

Soldering
heat test

Soldering area: T/2 of PWB thickness.
(PWB: T=1.6mm)

1/2

Soldering temperature: 260 ± 5

Soldering time: $3 \pm 0.5s$

260 ± 5

3 ± 0.5

Appearance:
No abnormality.

8.5

Solderability

1. Hand soldering

Please practice according to below
condition:

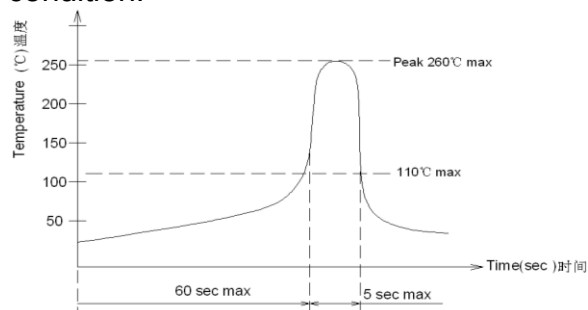
(1) Soldering Temperature : 350 ± 5
 350 ± 5

(2) Continual soldering time: $3 \pm 0.5s$
 3 ± 0.5

(3) Capacity of soldering iron: 20w
20

2. Automatic PIP soldering

For the product of T/H, according to below
condition:



At least 95% of surface
area of immersed
portion shall be covered
by solder.

95%

8.6

Humidity
test

(1) Temperature : 60 ± 2
 60 ± 2

(2) relative humidity: 90~95% R.H.
:90~95% R.H.

(3) Duration of test: 96h
96

(4) Take off a drop water

(5) Standard conditions after test: 1h
1

Contact resistance:

200m Max

Shall meet :

No. 6.2 to 6.4

No. 7.1 to 7.2

200m

:

No. 6.2 to 6.4

No. 7.1 to 7.2



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Product Specification

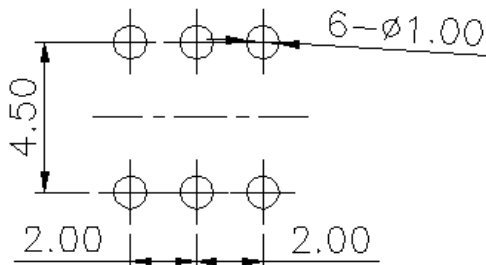
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8.7	Salt Spray	Apply the following environment to test: (1) Temperature : 35 ± 5 : 35 ± 5 (2) Salt water density: $5\pm 1\%$: $5\pm 1\%$ (3) Duration: 24 hours : 24 (4) After test, the salt deposit shall be removed by running water.	Appearance: No corrosion spot, no crack, no base plate naked. Contact Resistance: 200 m Max 200
8.8	Withstand K ₂ S	Apply the following environment to test: (1) Temperature: 35 ± 5 35 ± 5 (2) K ₂ S Density: 2% 2% (3) Duration: 2 minute. 2	Appearance: No corrosion spot, no crack, no base plate naked. Contact Resistance: 200 m Max 200

9. Recommended PCB Layout

PCB

(Top View)
(Single face board
T=1.6mm)





10.Packaging

Packaging type: PE Bag, 1000Pcs/Bag, 5000Pcs/Inner Carton. 20000Pcs/Outer Carton.

: PE , 1000Pcs/ . 5000Pcs/ . 20000Pcs/



11.Precaution

11.1 Immersion Soldering condition

ITEM	CONDITION
Preheat temperature	110 Max (Ambient temperature of soldering surface of P.W.B) 110 ()
Preheat time	60s, Max 60
Area of flux	1/2 Max of PWB Thickness 1/2
	260± 5 260± 5
Time of immersion	Within 5s 5
Number of soldering	2time Max (But should down heat of the first soldering) 2
Printed wiring board	Single side copper-clad laminates

(1) After switches were soldered, please be careful not to clean switches with solvent

(2) Under the condition of using soldering iron, soldering temperature shall be 350 max with
350 , 3 .

11.2 Note s

(1) Please be cautious not to give excessive static load or shock to switches.

(2) Please be careful not to stack up P. W. B. after switches were soldered.

(3) Preservation under high temperature and high humidity or corrosive gas should be avoided
Especially. When you need to preserve for a long period, do not open the carton.

(4) Products meet the ROHS & REACH environmental management substances control standards

ROHS & REACH