

DATA SHEET

SUNGMUN CODE : SHK SERIES

DESCRIPTION : DIP SWITCH

SUNGMUN ELECTRONICS CO., LTD.

Address 301-302,Bucheon Technopark 345, Seokcheon-ro, Ojeong-gu
Bucheon-si, Gyeonggi-do, Korea
TEL. +82-32-328-1941~4
FAX +82-32-328-1945
E-mail sungmun@sungmun.co.kr
Website www.sungmun.com



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1. Style:

This specification describes "WASHABLE OF DUAL IN-LINE PACKAGE SWITCHS", mainly use as signal switch of electric devices, with the general requirements of mechanical and electrical characteristics.

1-1 Operating Temperature Range : -40°C ~ +85°C

1-2 Storage Temperature Range : -40°C ~ +85°C

1-3 The shelf life of product is within 6 months.

2. Current Range:

2-1 Non-Switching : 100mA, DC 50V

2-2 Switching : 25mA, DC 24V

3. Type of Actuation : Actuated by sliding

4. Test sequence

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
	1	VISUAL EXAMINATION	By visual examination check without any out pressure & testing.	There shall be no defects that affect the serviceability of the product
MECHANICAL PERFORMANCE	2	CONTACT RESISTANCE	1.To be measured between the two terminals associated with each switch pole. 2.Measurements shall be made with a 1 kHz shall current contact resistance meter.	100mΩ max. (initial)
	3	INSULATION RESISTANCE	500 V DC , 1 minute±5 sec.	100MΩ min
	4	DIELECTIRC WITHSTANDING VOLTAGE	300 V AC (50Hz or 60 Hz) shall be applied between all the adjacent terminals and between the terminal and the frame for 1 minute.	There shall be no breakdown or flashover.
	5	OPERATION FORCE	Applied in the direction of operation. ON→OFF  OFF→ON 	500 gf max – SHK

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	6	STOP STRENGTH	DHA: 0.8 kgf is applied in the operating direction and pulling direction operated for a period of 15 seconds.		There shall be no sign of damage mechanically.
	7	SOLDERING HEAT RESISTANCE	Soldering Temperature :		1. As shown in Item 3~6 2. Contact Resistance : 200mΩ max (final-after test)
			Prod series	SMT type terminal SHK	
			Temp	See the Temperature profile	
			Time		
1. Duration of solder Immersion : 5±1 sec 2. Frequency of solder process : 1time max (PCB is 1.6mm in thickness)					
8	VIBRATION	Shall be vibrated in accordance with Method 201A of MIL-STD-202F 1)Frequency: 10-55-10 Hz 1 min/cycle. 2)Direction: 3 vertical directions including the direction of operation. 3)Test Time: 2 hours each direction.		Ditto	
9	SHOCK	Shall be shocked in accordance with Method 213B Condition A of MIL-STD- 202F 1) Acceleration : 50G 2) Action Time : 11±1 m seconds 3) Testing Direction : 6 sides 4) Test cycle : 3 times in each direction		Ditto	
DURABILITY	10	OPERATION LIFE	Measurements shall be made following the test set forth below: 1. 25mA,24 V DC resistive load 2. Rate of operation : 15~20cycles/min 3. Cycle of Operation : 1000 cycles		1. As shown in Item 3~6 2. Contact Resistance : 1Ω max (final-after test)
WEATHER PROOF	11	RESISTANCE LOW TEMPERATURE	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made : 1. Temperature : -40±3°C 2. Time : 96 hours		1. As shown in Item 3~6 2. Contact Resistance : 200mΩ max (final-after test)
	12	RESISTANCE HIGH TEMPERATURE	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before		Ditto

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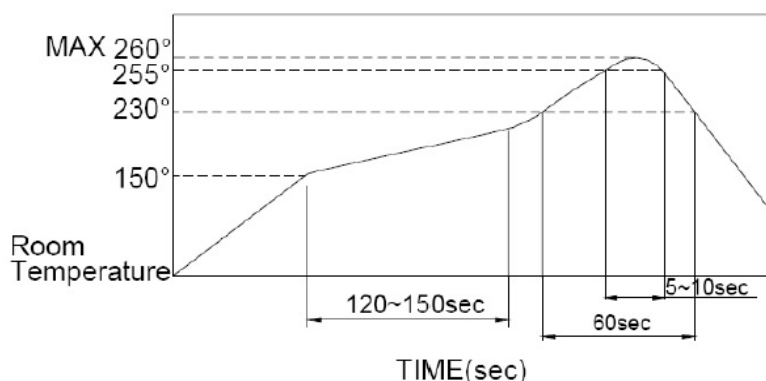
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			measurements are made : 1. Temperature : $85\pm 2^{\circ}\text{C}$ 2. Time : 96 hours	
13	RESISTANCE HUMIDITY		Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made : 1. Temperature : $40\pm 2^{\circ}\text{C}$ 2. Relative Humidity : 90~95% 3. Time : 96 hours	1. As shown in Item 4~6 2. Contact Resistance : $200\text{m}\Omega$ max 3. Insulation Resistance : $10\text{Mm}\Omega$ max

5. Soldering Conditions

Condition for Soldering -SHK- Series



5-1 The condition mentioned above is the temperature on the Cu foil of the P.C.B surface.

There are cases where board's temperature greatly differs from switch's surface temperature depending on board's material, size, thickness, etc.

Care, therefore, should be used not to allow switch's surface temperature to exceed 260°C .

5-2 Manual Soldering :

- 1) Soldering Temperature : 350°C Max
- 2) Continuous Soldering Time : 5sec Max.

5-3 Precautions in Handling :

- 1) Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.
- 2) Don't clean the switch body except with top tape sealed type, which can only spray of cleaning method from top of s/w.