1. Style

This specification describes “Sub—Miniature Toggle Switches”, mainly used as signal switch of electric devices, with the general requirements of mechanical and electrical characteristic.

Operating Temperature Range : -30 ℃~+85℃.

2. Current Range:

Switching voltage max. ：AC/DC：120V/28V.

Inrush current max：DC：60A.

Dielectric strength(60HZ, 1 min)；1.5KV.

Operating life at max.load and at max. inrush current：6000 operations.

Contact Rating：

2.1 Silver Plating Standard：

Plating		Rating
Q=Silver	Fixed Terminal：Silver plated over copper alloy. Movable contact：Silver plated over copper alloy.	3Amps @120VAC or 28VDC. 1Amps @250VAC.
C=Gold over silver	Fixed Terminal：Copper alloy with silver plated over gold plate. Movable contact：Copper alloy with silver plated over gold plate.	
S=Silver, tin-lead	Fixed Terminal：Copper alloy with silver plated ,tin-lead. Movable contact：Silver plated over copper alloy.	
K=Gold over silver tin-lead	Fixed Terminal：Copper alloy with silver plated over gold plate,tin-lead. Movable contact：Copper alloy with silver plated over gold plate.	

2.2 Gold Plating Standard：

Plating		Rating
R=Gold	Fixed Terminal：Copper alloy with gold Plate over nickel plate. Movable contact：Copper alloy with gold Plate over nickel plate.	0.4 VA Max. @20VAC or DC Max.
G=Gold, tin-lead	Fixed Terminal：Copper alloy with gold plated over nickel plate, tin-lead. Movable contact：Copper alloy with gold plated over nickel plate.	

3. **Type of Actuation:** Sub—Miniature Toggle Switches.

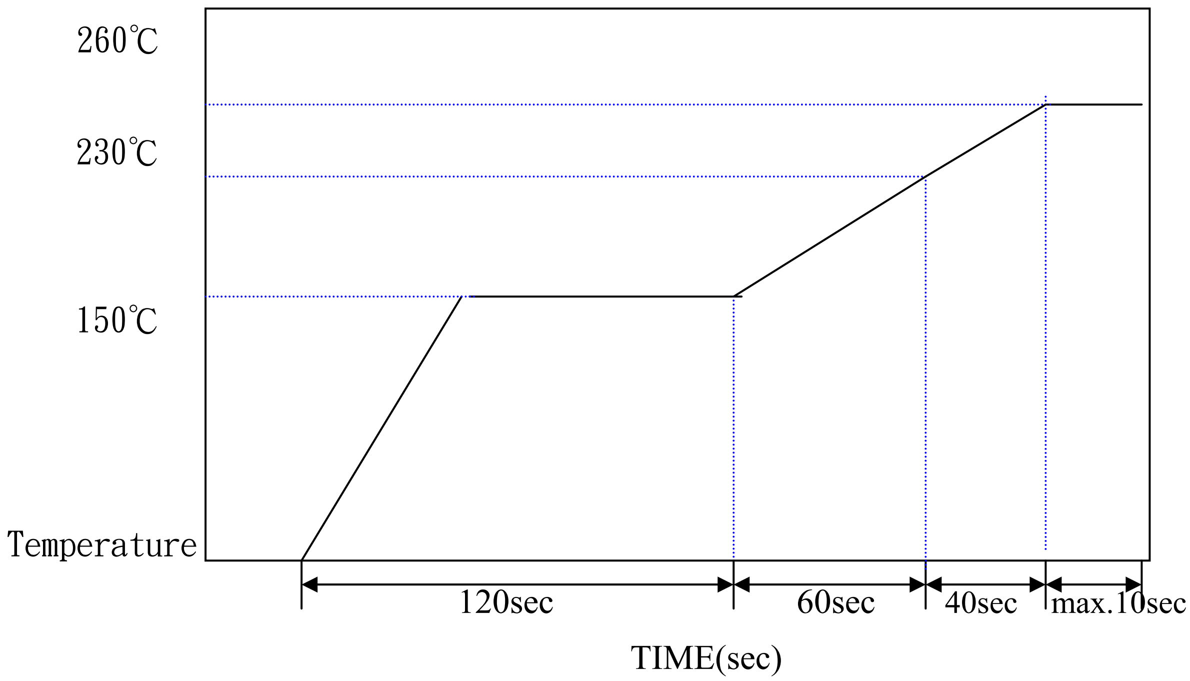
4. **Test Sequence:**

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
ELECTRIC PERFORMANCE	1	Visual Examination	By Visual Examination check without and out pressure & testing.	There shall be no defects that affect the serviceability of the product.
	2	Contact Resistance	@2-4VDC 100mA. For both silver and gold plated contacts.	20mΩ Max
	3	Insulation Resistance	Measurements shall be made following application of 1000 V/ DC 100mA potential across terminals and cover.	1000MΩ min/1000V
	4	Dielectric Withstanding Voltage	1000 VAC(50Hz or 60Hz) shall be applied across terminals and cover for 1 minute.	There shall be no breakdown or flashover.

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
MECHANICAL PERFPRMANCE	5	Solder Heat Resistance	WAVE SOLDERING： ①Soldering Temperature:260±5℃. ②Duration of Solder Immersion: 5 ±1 seconds ③Frequency of Soldering Process 2 times max.(PCB is 1.6mm in thickness)	①Shall be free from pronounced backlash and falling-off or breakage terminals ②As shown in item 2~4.
	6	Vibration	Shall be vibrated in accordance with Method 201A of MIL-STD-202F ①Frequency: 10-55-10Hz in 1-min/cycle. ②Direction: 3 vertical directions including the directions of operation ③Test time:2 hours each direction.	As shown in item 2~4
	7	Shock	Shall be shocked in accordance with Method 213B condition A of MIL-STD-202F ①Acceleration; 5kg ②Action time: 11±1m seconds. ③Testing Direction: 6 sides. ④Test Cycle: 3 times in each direction.	As shown in item 2~4
	8	Actuation Force	MODEL-1305N MECHANICAL TEST 500gram 、1000gram、 2000gram.	At for test the force. Force:300±100grams.
OPERATING LIFE	9	Operating Life	Measurements shall be made following the test forth below: ①3A,120VAC resistive load—silver plated. 1A,250VAC resistive load—silver plated. 0.4A, 20VAC resistive load—gold plated. ② Rate of Operation: 6-8operation cycles per minute. ③ Electronics Life Test: 6,000 cycles.	① Dielectric Strength：1000V. ② Insulation Resistance: 1000MΩ min.
			Mechanical Life Test: 30,000 cycles.	Contact Resistance: 20mΩ Max.

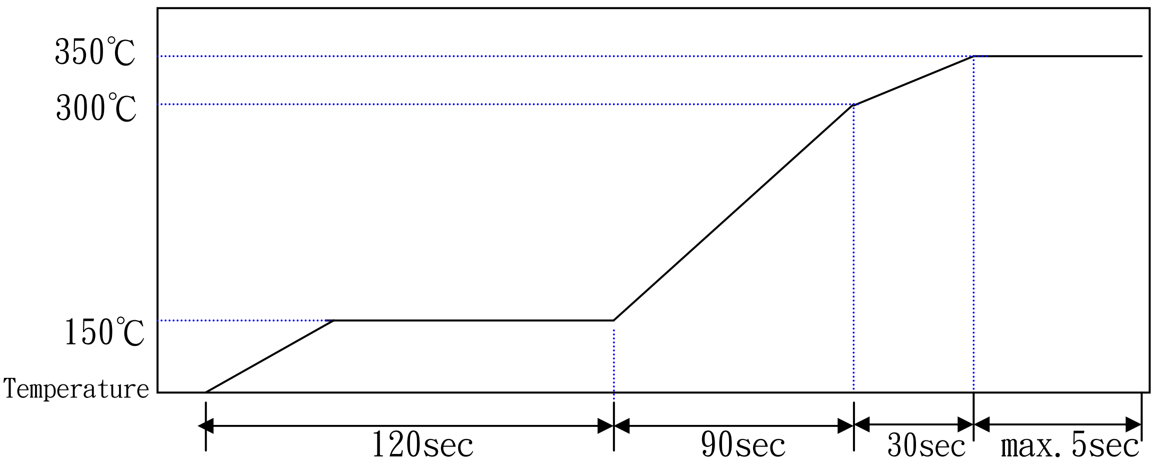
	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
HUMIDITY RESISTANCE	10	Resistance Low Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: ①Temperature:-40±3℃ ②Time:96 hours.	As shown in item 2~4.
	11	Resistance High Temperature	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: ①Temperature:85±2℃ ②Time:96 hours.	① As shown in item 3~4. ② Insulation Resistance: 1000MΩ .
	12	Resistance Humidity	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: ①Temperature:40±2℃ ②Relative Humidity:90~95% ③Time:96 hours.	①Contact Resistance: 20mΩ Max. ②Insulation Resistance: 1000MΩ min.
	13	The Salt Testing	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before the measurements are made: ①Temperature:35±2℃ ②The ratio of salt-water：5% ③The spray amout of salt- water： 1~2 ml/h. ④ Time:48 hours.	The testing standard based on bubble, crack, And magnifying glass with gauge.

5. SOLDERING CONDITIONS:



■ Manual Soldering

Soldering Temperature	Max. 350℃
Continuous Soldering Time	Max. 5 seconds



■ Precautions in Handling

Care should be exercised so that flux from the upper part of the printed circuit board does not adhere to the switch.