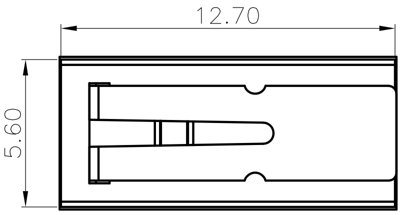
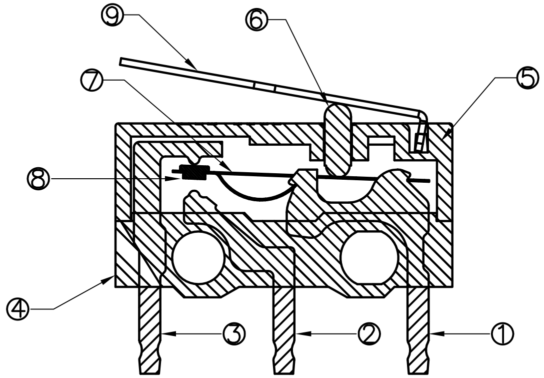
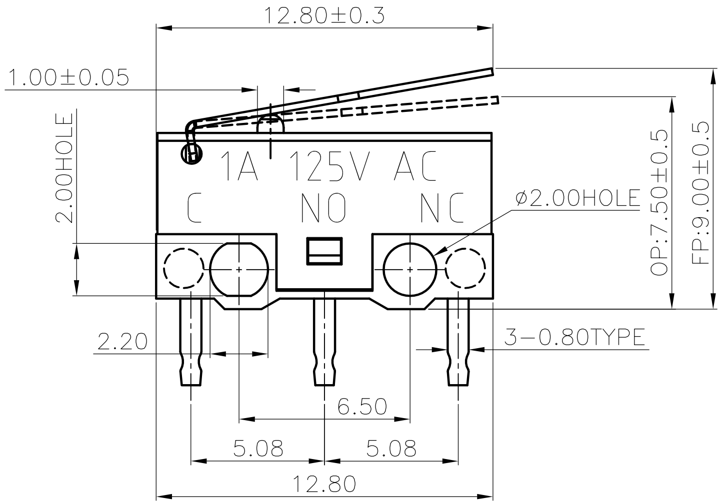
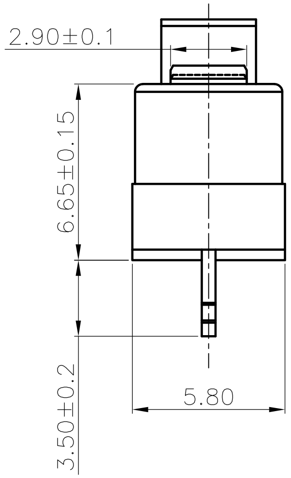
ABIDE BY ROHS



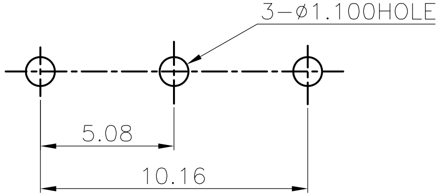




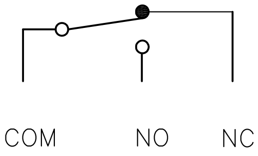


Specification :

1.Rating : DC30V 0.1A
2.Contact Resistance : 100mΩ Max
3.Insulation Resistance :100MΩ Min (DC250V)
4.Withstand Voltage : AC250V (50-60Hz)for 1 minute
5.Operation Force : 25±10gf
6.Life Test :1,000,000 Cycles(min)
7.Pre-Travel : 1.50±0.5 mm



PCB Layout(Pattern Side)



Circuit Diagram

ITEM	PART NAME	TER'NO.	QTY.	MATERIAL	FINISHING	REMARK
⑨	Lever	——	1	Stainess Steel	——	——
⑧	Contact	——	1	Ag	——	——
⑦	Shrapnel	——	1	Beryllium Copper	——	——
⑥	Keystoke	——	1	POM	White	UL94HB
⑤	Cover	——	1	PBT	Black	UL94HB
④	Base	——	1	PBT	White	UL94HB
③	Terminal	3	1	BRASS(0.5t)	Plating Silver	——
②	Terminal	2	1	BRASS(0.5t)	Plating Silver	——
①	Terminal	1	1	BRASS(0.5t)	Plating Silver	——

APPROVALS		DATE
DRAWN	wanwenxue	Jul.10.2007
CHECKED		
APPROVALS		

东莞市凯华电子有限公司
KAIHUA ELECTRONICS CO.,LTD

TITLE:	Micro Switch
PART NO.	MI126703D78
UNIT: mm	SCALE: 1:1
PROJ.	
DRAWING NO.	——
SHEET 1 OF 1	

TOLERANCES ARE			ANGLE
	30<L	±0.30	±2°
	10<L≦30	±0.20	
	5<L≦10	±0.15	
	L≦5	±0.10	

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

Micro Switch Specification

Model Type:	Micro Switch
Customer No:	
Model No:	MI126703D78

1.General:

1-1 Configuration : SPDT

1-2 Switch rating: DC30V 0.1A

1-3 Operation temperature range:-10℃ ~ 70℃

1-4 Appearance and dimensions:See outside drawing page

1-5 Test conditions: Unless otherwise specified,the atmospheric conditions for making measurements and tests are as follows.

Ambient temperature: 5℃~35℃
Relative humidity :45%~85% RH
Air pressure : 86~106 kPa

1-6 Storage method

1.6.1 If you don't use the product immediately,store it as delivered in the following environment with neither direct sunshine nor corrosive gas and in normal temperatures. However,it is recommended that you should use it as soon as possible before six months pass.

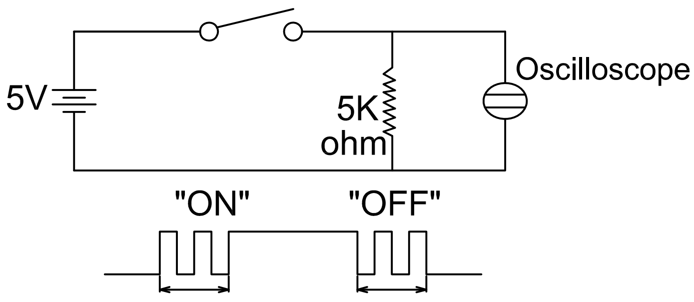
1.6.2 After you break the seal,you should put the remaining in a plastic bag to separate it from the outside and store it in the same environment mentioned above. You should use it up as soom as possible.

1.6.3 Do not stack too many switches for strafe.

1.6.4 Storage condition: Ambient temperature: -40℃~80℃
Relative humidity :45%~85% RH Air pressure : 86~106 kPa

2.PERFORMANCE

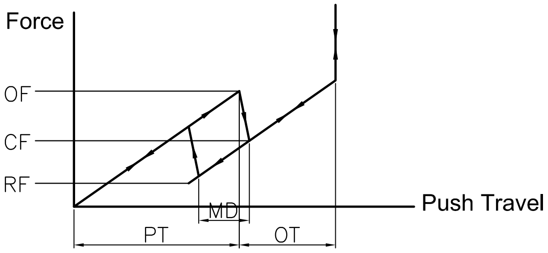
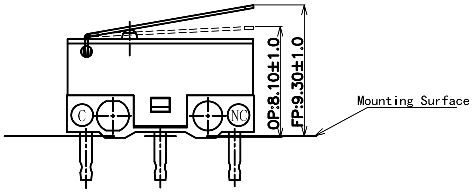
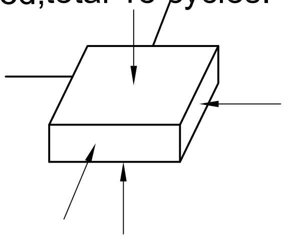
2-1 Electrical characteristics

NO	Item	Test Conditions	Criteria
2.1.1	Contact resistance	Applying a static load two the actuating force to the center of the stem,measurements shall be made with a 1KHz small-current contact resistance meter.	100mΩ max
2.1.2	Insulation resistance	Measurements shall be made following application of DC250V potential across terminals and across terminals and frame for one minute.	100MΩ min
2.1.3	Dielectric withstanding voltage	AC 500V(50Hz or 60Hz)shall be applied across terminals and across terminals and frame for one minute.	There shall be no breakdown.
2.1.4	Bounce	Lightly striking the center of the stem at a rate encountered in normal use(3to4 operations per sec)bounce shall be tested at "ON"and"OFF".  	Criteria: ON: 5ms max. OFF: 5ms max.

Micro Switch Specification

Model Type:	Micro Switch
Customer No:	
Model No:	MI126703D78

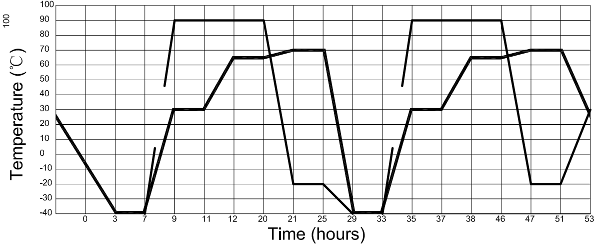
2-2 Mechanical characterstics

NO	Item	Test Conditions	Criteria
2.2.1	Operation force	Push by recommended operating condition 	See 4/4 page
2.2.2	Operation characteristics	Push by recommended operating: 	
2.2.3	Stop strength	A static load of 3 Kgf shallbe applied in the direction of stem operation for a period of 60 seconds.	No damage (Electrical and mechanical)
2.2.4	Stem strength	The maximun force to withstand a pull applied opposite to the direction of stem operation shall be measured.	500gf min
2.2.5	Drop resistance test	1)Height:1.5m 2)Acceleration:80G 3)Cycles of test:3 cycles each in 6 directions, shall be satisfied,total 18 cycles. 	NO 2.1and2.2.1 to 2.2.2 shall be satisfied.
2.2.6	Salt Mist test	The switch shall be checked after following test: 1)Temperature: 35±5 ℃ 2)NaCl concentration: 5±1%; 3)Duration: 24 hours, 4)After immersing, salt deposit shall be removed by running water.	No remarkable corrosion shall be recognized in metal parts.
2.2.7	Soldering heat test	Soldering area:t/2 of P.W.B thickness thickness (P.W.B:t=1.6) Soldering temperature:260±5℃ Soldering time:5±1 sec.	No Damage (Electrical and mechanical)

Micro Switch Specification

Model Type:	Micro Switch
Customer No:	
Model No:	MI126703D78

2-3 Reliability test

NO	Item	Test Conditions	Criteria
2.3.1	Cold test	1)Temperature:-20±2℃ 2)Duration :96hours 3)Take off a drop water 4)Standard condition after Test: 1 hour	Contact resistance: 200mΩ max. No 2.1.2to2.1.4and2.2.1
2.3.2	Heat test	1)Temperature:80±2℃ 2)Duration :96hours 3)Standard conditions after Test: 1 hour	Contact resistance :200mΩ max. No2.1.2to2.1.4and2.2.1 to2.2.2shall be satisfied.
2.3.3	Temperature cycle Test	1)Test cycles:5cycles 2)Standard conditions after test: 1 hour 3)1cycle 	Contact resistance :200mΩ max. No2.1.2to2.1.4and2.2.1 to2.2.2shall be satisfied.
2.3.4	Solder ability Test	The top of the terminals shall be dipped in the solder bath at 255±10℃ for 3±0.5 seconds.	Ninety-five percent of terminals shall be dipped.
2.3.5	Humidity test	1)Temperature:60±2℃ 2)Relative humidity:90--95% 3)Duration :96hours 4)Take off a drop water 5)Standard conditions after test:1hour	Contact resistance :200mΩ max. No2.1.2to2.1.4and2.2.1 to2.2.2shall be satisfied.
2.3.6	Operating life test	1)After 2.3.4 / 2.2.7 /2.3.5 2)1mA 6VDC Resistance load 3)Operation speed:2-3cycles/sec 4)Actuation force:150gf 5)Cycles of operation:1,000,000cycles min	Contact resistance: :10Ω max. Bounce:10m sec max No2.1.2to2.1.3and 2.2.2 shall be satisfied.
2.3.7	Sulfuration	The switch shall be checked after following test: 1)Temperature: 35±5℃ 2）Na_2S Concentration: 2%； 3）Duration: 2 min,	No remarkable corrosion shall be recognized in metal parts.

Micro Switch Specification

Model Type:	Micro Switch
Customer No:	
Model No:	MI126703D78

3. Wave soldering：When applying wave soldering, the peak temperature of the wave Oven should be set to 260 ℃ max. Condition for soldering (Wave & Non-washable Type) Temperature Profile: （ Figure 1 ）

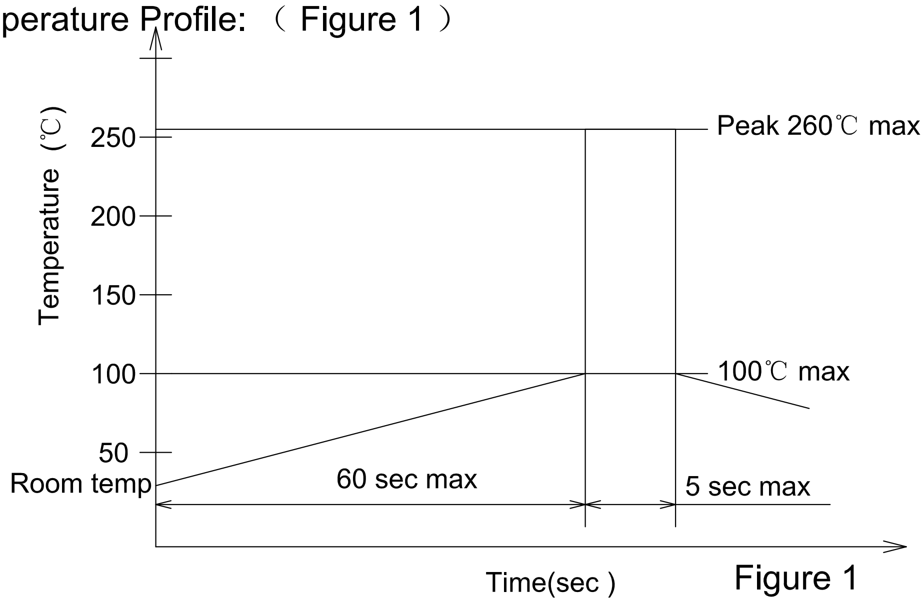


Figure 1

3.1 Wave soldering conditions

Items	Conditions
Preheating temperature	Ambient temperature of the soldered surface of PC board.100℃ max
Preheating time	60 sec max
Soldering temperature	260℃ max
Continuous dipping time	5 sec max
Number of soldering	2 time max

3.2 Manual soldering

Temperature of soldering iron : 350±10℃

Application time of soldering iron : within 3s.

4. FP、OP、PT、OF Specification and definition as below：

Symbol	Unit	Value	Type
FP	mm	9.00±0.5	
OP	mm	7.50±0.5	
PT	mm	1.50±0.5	
OF	gf	25±10	
RF	gf	20	min