

# 7M Series

Snap-Acting Pushbutton Switches



## SPECIFICATIONS

**CONTACT RATING:** Dependent upon contact material  
see page 106.

**MECHANICAL LIFE:** 50,000 make-and-break cycles.

**CONTACT RESISTANCE:** 20mΩ max. initial @ 2-4VDC  
100mA for both silver and gold plated contacts.

**INSULATION RESISTANCE:** 1,000MΩ min.

**DIELECTRIC STRENGTH:** 1,000 Vrms min. @ sea level.

**OPERATING TEMPERATURE:** -30°C to 85°C.

## MATERIALS

**CASE:** Diallyl phthalate(DAP) (UL94V-0).

**PLUNGER:** Glass filled Nylon or Glass filled polyester.(PBT)

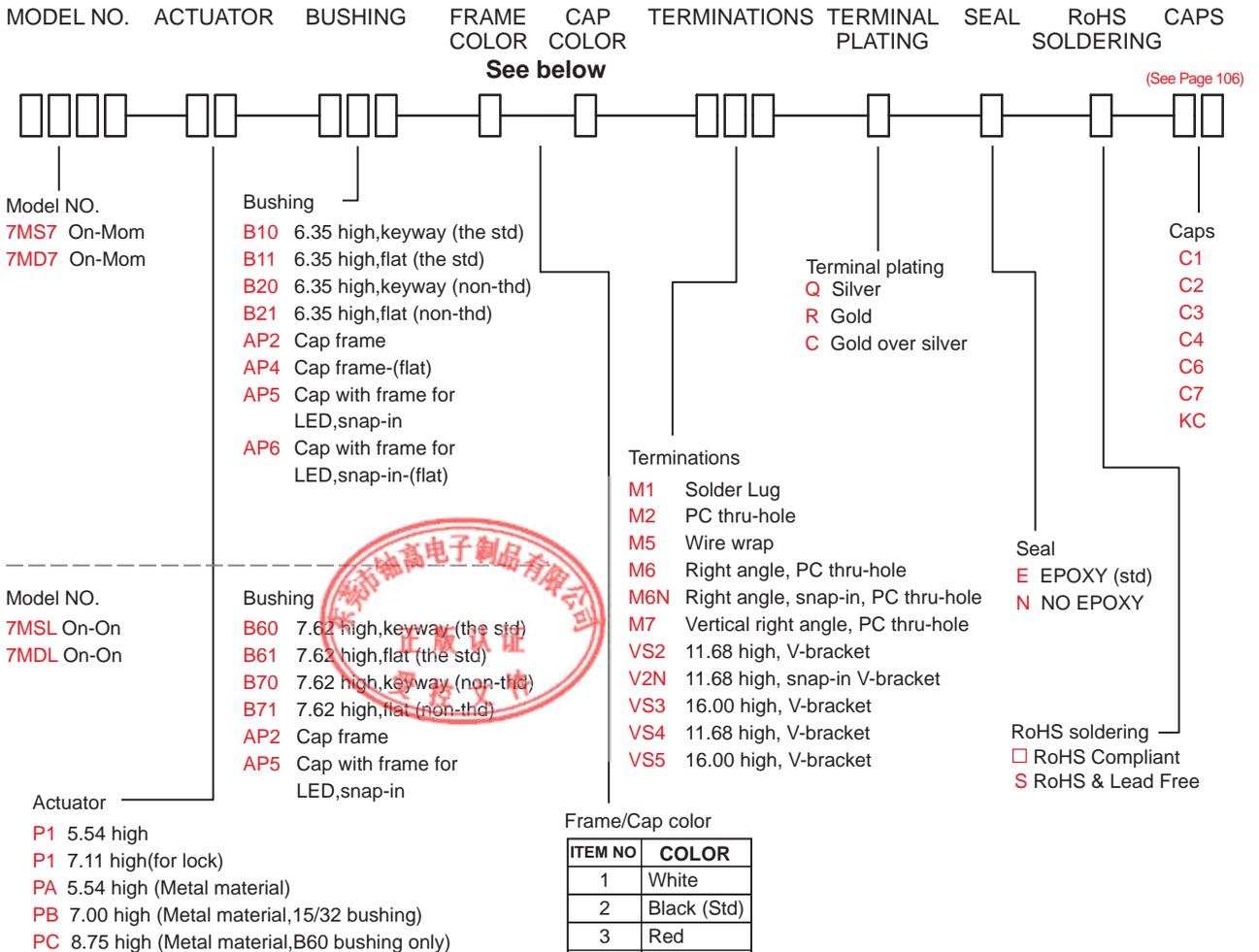
**BUSHING:** Brass,nickel plated.

**HOUSING:** Stainless Steel.

**CONTACT:** Brass or Copper alloy, silver or gold plated.

※7MSL/7MDL with gold over silver for plating  
(See Page 106)

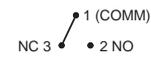
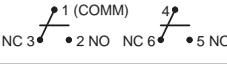
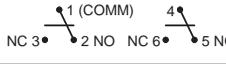
## HOW TO ORDER



\* Besides standard color,  
other colors need to check stocks available.

7M Pushbutton Switches

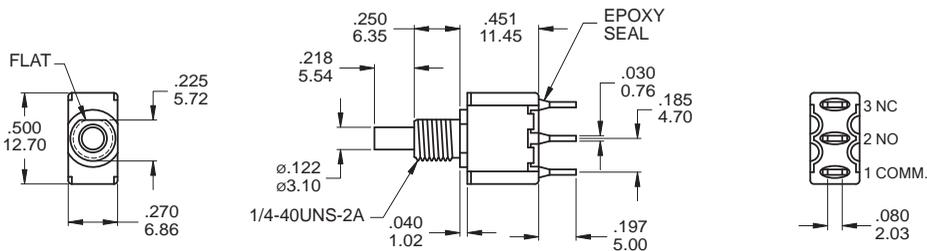
## SWITCH FUNCTION

NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS / SCHEMATIC	
			POS.1	POS.2	POS.1	POS.2
SP	Q2717	7MS7	ON	MOM	1-3 	1-2 
DP	Q2727	7MD7	ON	MOM	1-3,4-6 	1-2,4-5 

MOM= MOMENTARY

## POLE OPTIONS

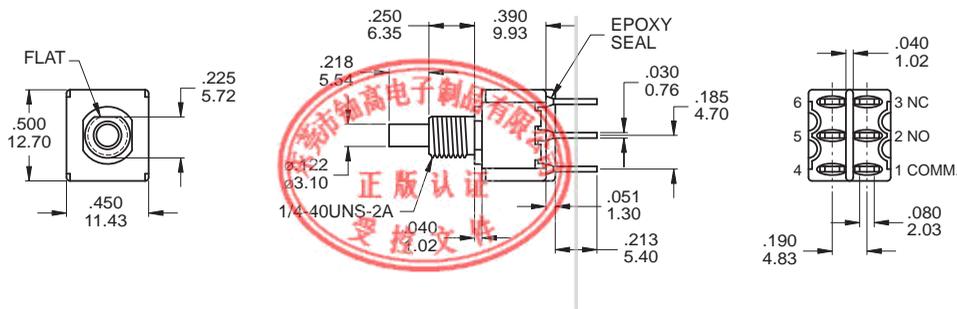
### M1



### SPDT

Part No. Shown : 7MS7P1B11M1QE

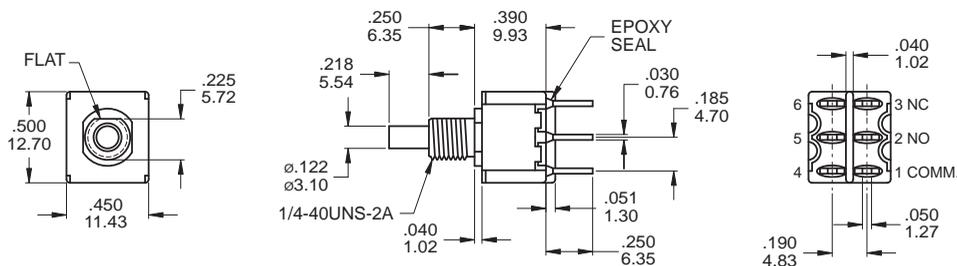
### M1



### DPDT

Part No. Shown : 7MD7P1B11M1QE

### M2



### DPDT

Part No. Shown : 7MD7P1B11M2RE

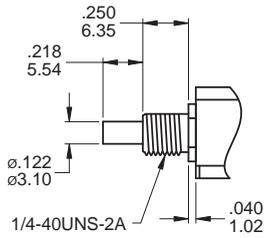


# 7M Series

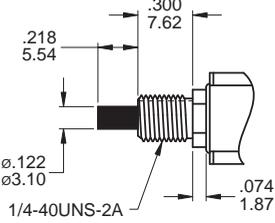
Snap-Acting Pushbutton Switches

## ACTUATOR OPTIONS

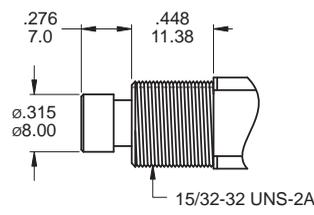
**P1**



**PAB60** handle, metal material

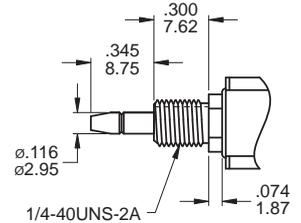


**PBB13** handle, metal material



Use with B13 bushing only

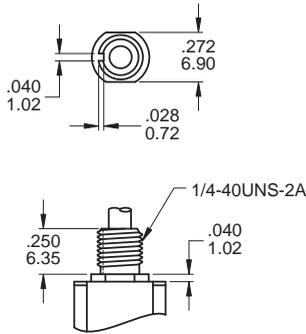
**PCB60** handle, metal material



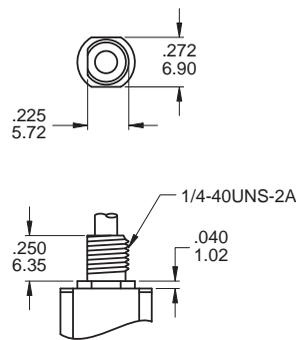
Use with B60 bushing std  
\* PC Actuator only for KC Cap

## BUSHING OPTIONS

**B10** THD STD  
**B20** NON-THD

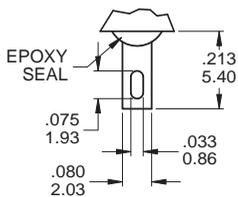


**B11** THD STD  
**B21** NON-THD



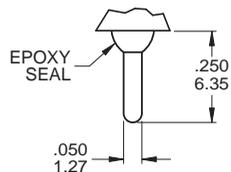
## TERMINATION OPTIONS

**M1** Solder lug



.030(0.76) THK.

**M2** PC Thru-hole



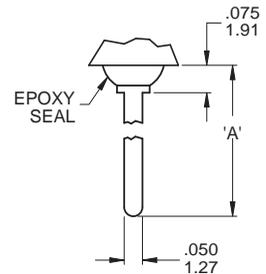
.030(0.76) THK.

**M3** Quick connect



.030(0.76) THK.

**M5** Wire Wrap



.030(0.76) THK.

## OTHER TERMINATION OPTIONS

- M6** Right angle P.C. Mount
- M7** Right angle P.C. Mount
- VS2** Vertical bracket P.C. Mount
- VS3** Vertical bracket P.C. Mount
- VS4** Vertical bracket P.C. Mount
- VS5** Vertical bracket P.C. Mount

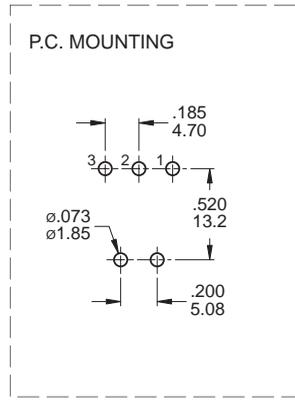
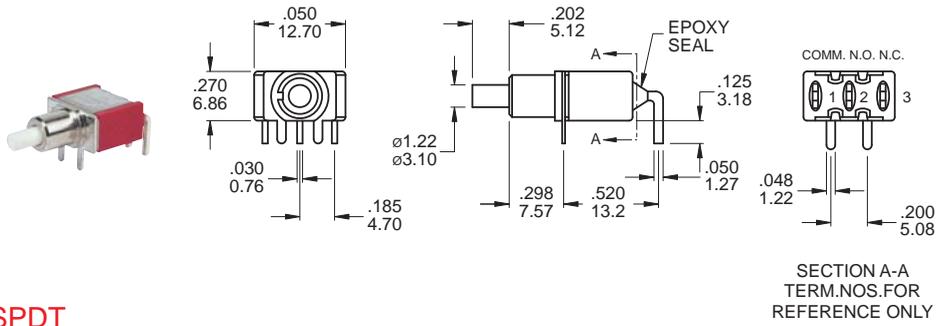
- M6N** Right angle P.C. Mount  
Snap-in bracket
- V2N** Vertical bracket P.C. Mount  
Snap-in bracket

OPTION CODE	DIM. 'A'
M51	.750 (19.50)
M52	.964 (24.48)
M53	.426 (10.80)
M54	.650 (16.50)



7M Pushbutton Switches

## M6

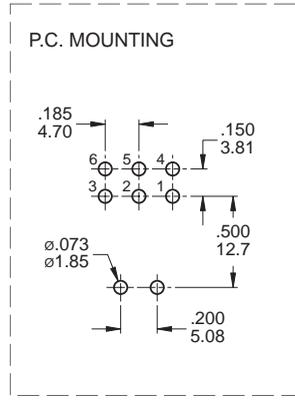
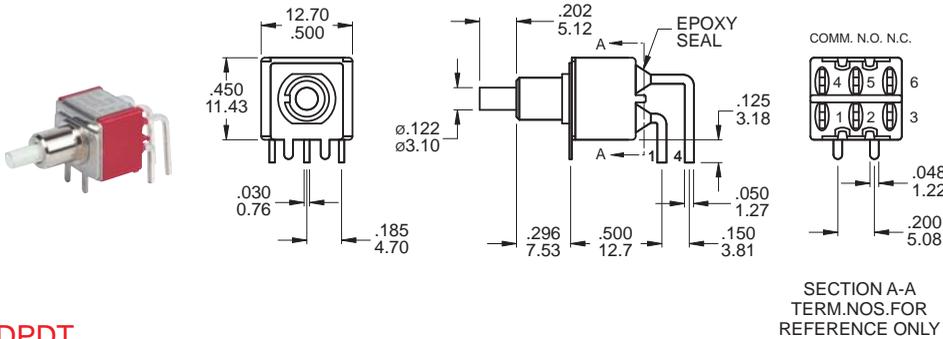


## SPDT

Part No. Shown : 7MS7P1B20M6QE

SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## M6

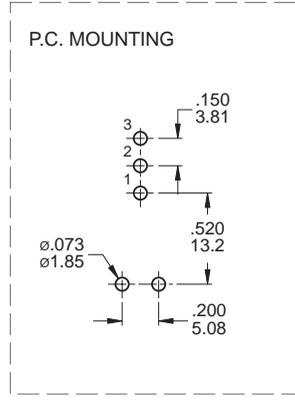
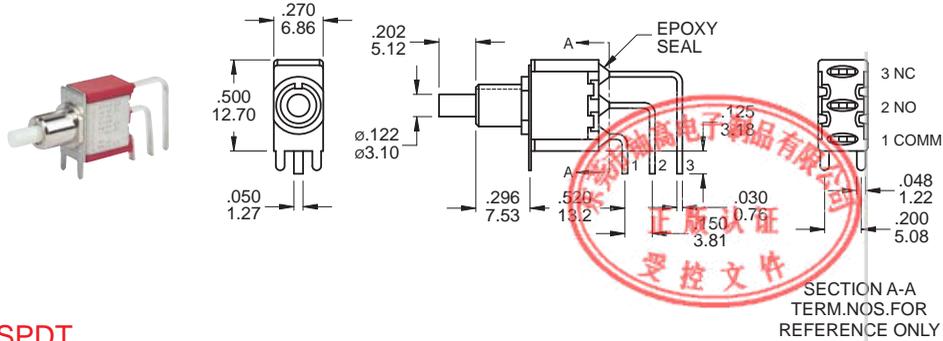


## DPDT

Part No. Shown : 7MD7P1B20M6QE

SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## M7

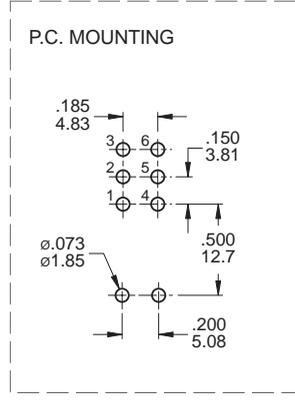
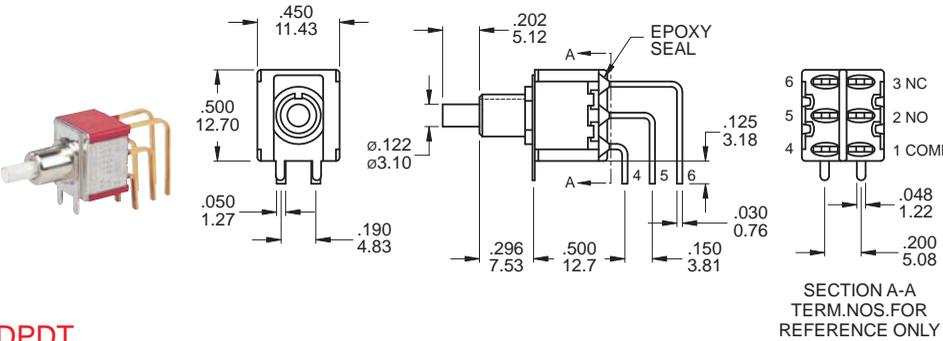


## SPDT

Part No. Shown : 7MS7P1B20M7QE

SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

## M7



## DPDT

Part No. Shown : 7MD7P1B20M7QE

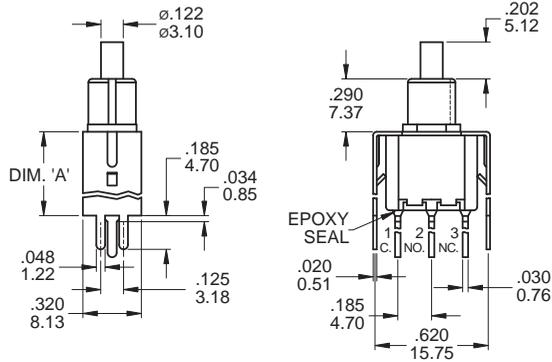
SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY



# 7M Series

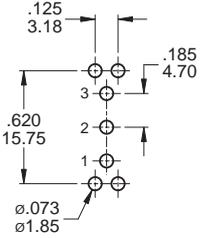
Snap-Acting Pushbutton Switches

## VS2 - VS3



OPTION CODE	DIM. 'A'
VS2	.460 11.68
VS3	.630 16.00

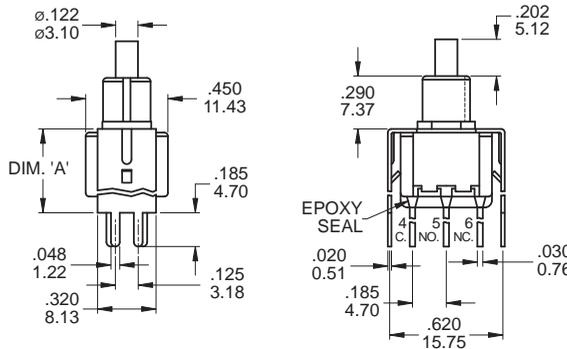
### P.C. MOUNTING



## SPDT

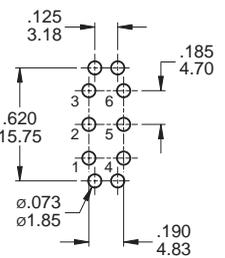
Part No. Shown : 7MS7P1B20VS2RE

## VS2 - VS3



OPTION CODE	DIM. 'A'
VS2	.460 11.68
VS3	.630 16.00

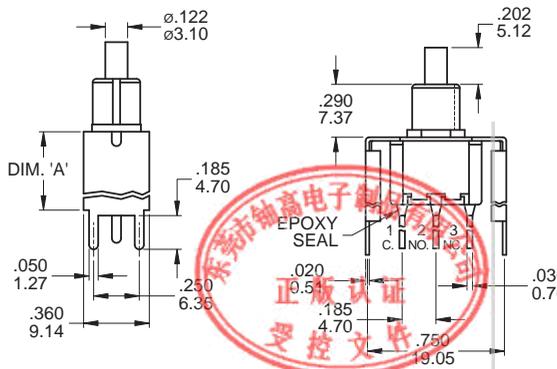
### P.C. MOUNTING



## DPDT

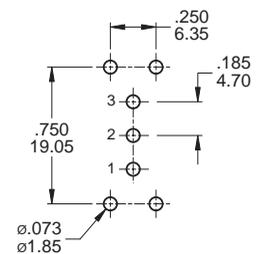
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## VS4 - VS5



OPTION CODE	DIM. 'A'
VS4	.460 11.68
VS5	.630 16.00

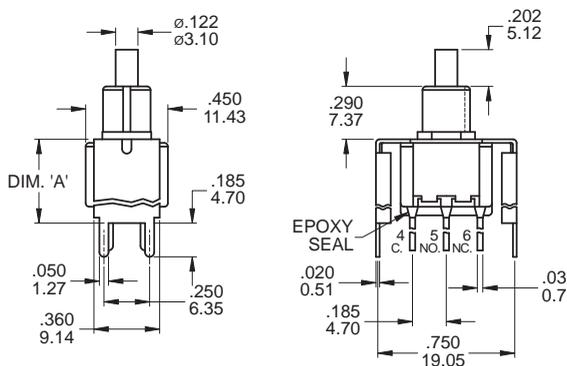
### P.C. MOUNTING



## SPDT

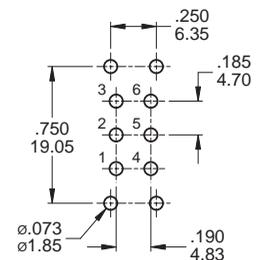
Part No. Shown : 7MS7P1B20VS4QE

## VS4 - VS5



OPTION CODE	DIM. 'A'
VS4	.460 11.68
VS5	.630 16.00

### P.C. MOUNTING



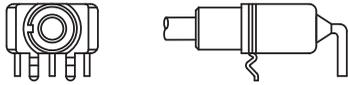
## DPDT

Part No. Shown : 7MD7P1B20VS4QE

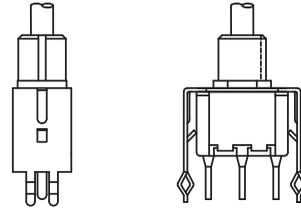
7M Pushbutton Switches

### SNAP-IN TERMINATION OPTIONS

M6N

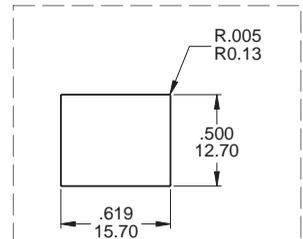
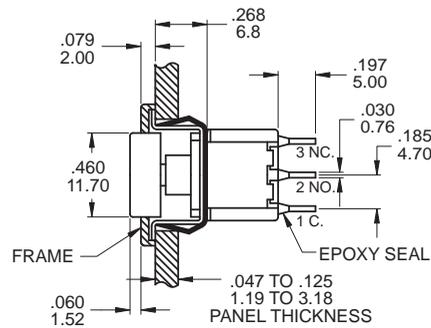
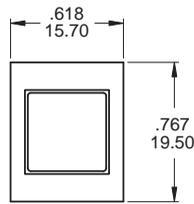


V2N



### PANEL MOUNTING

AP2 CAP & FRAME



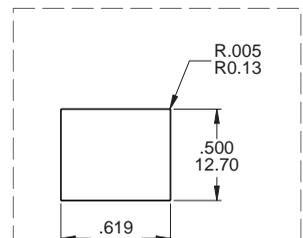
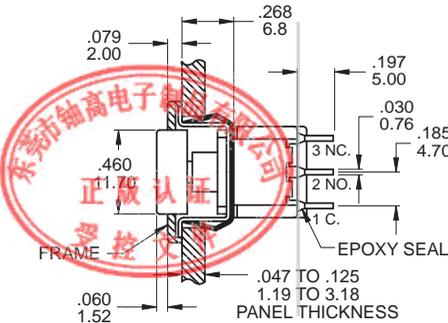
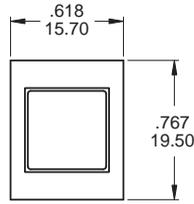
INCREASE TO .620/.625 15.75/15.88 FOR .091/.125 2.31/3.18 THK PANEL

PANEL LAYOUT

SPDT

Part No. Shown : 7MS7AP223M1QE

AP2 CAP & FRAME



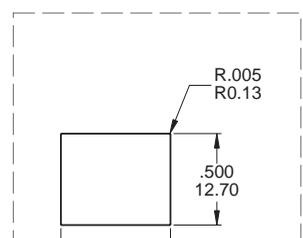
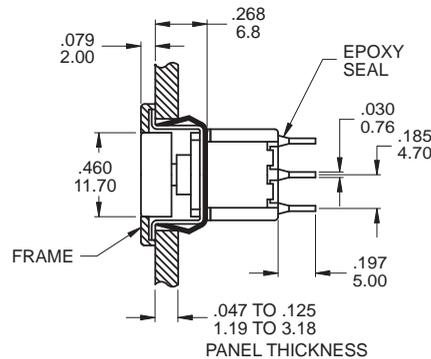
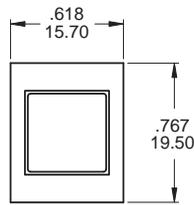
INCREASE TO .620/.625 15.75/15.88 FOR .091/.125 2.31/3.18 THK PANEL

PANEL LAYOUT

DPDT

Part No. Shown : 7MD7AP223M1QE

AP4 CAP & FRAME



INCREASE TO .620/.625 15.75/15.88 FOR .091/.125 2.31/3.18 THK PANEL

PANEL LAYOUT

SPDT

Part No. Shown : 7MS7AP429M1RE



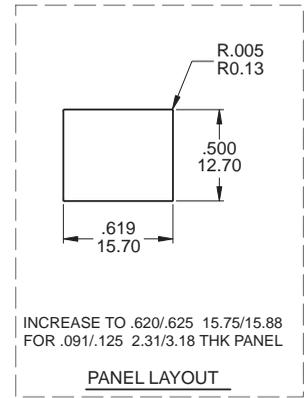
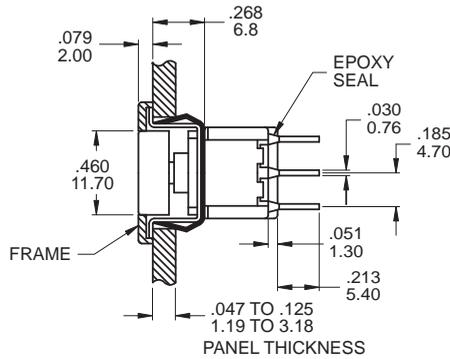
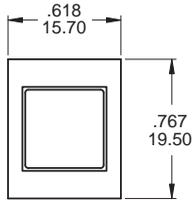
7M Pushbutton Switches

# 7M Series

Snap-Acting Pushbutton Switches

## PANEL MOUNTING

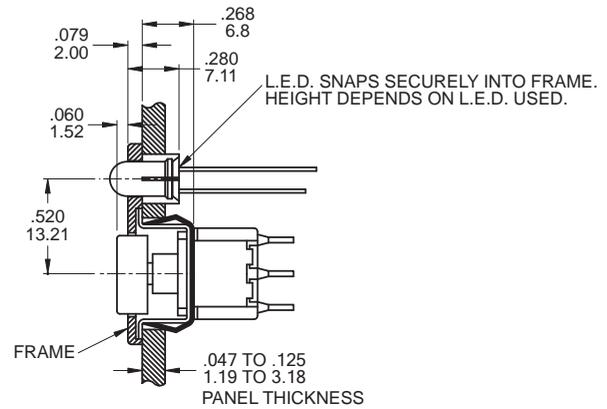
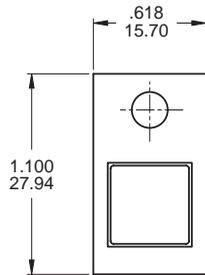
### AP4 CAP & FRAME



### DPDT

Part No. Shown : 7MD7AP423M1RE

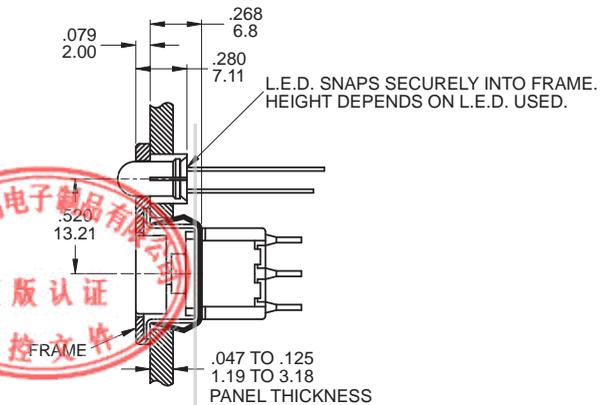
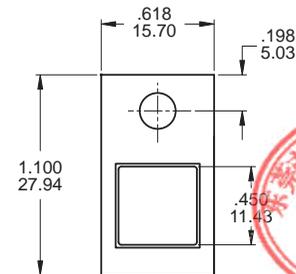
### AP5 CAP & FRAME



### SPDT

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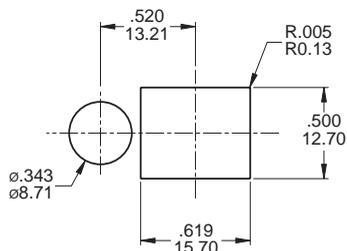
### AP6 CAP & FRAME



### SPDT

Part No. Shown : 7MS7AP629M1RE

### FOR AP5/AP6



PANEL LAYOUT

### CAP AND FRAME COLORS

OPTION CODE	COLOR
1	WHITE
2	BLACK(std)
3	RED

### LED COLORS

OPTION CODE	COLOR
3	RED(std)
4	ORANGE
6	GREEN

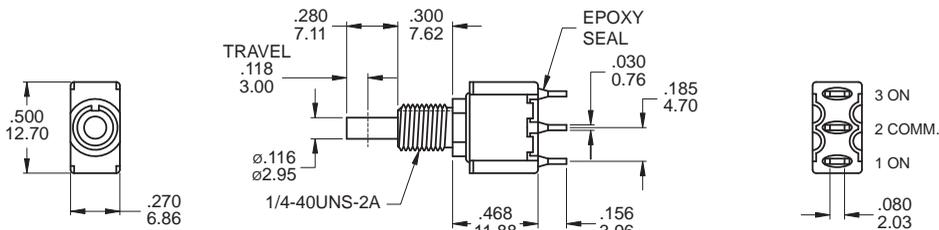
\* Besides standard color, other colors need to check stocks available.

### SWITCH FUNCTION

NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS / SCHEMATIC	
			POS.1	POS.2	POS.1	POS.2
SP	Q27	7MSL	ON	ON	1-2 	2-3 
DP	Q27	7MDL	ON	ON	1-2,4-5 	2-3,5-6 

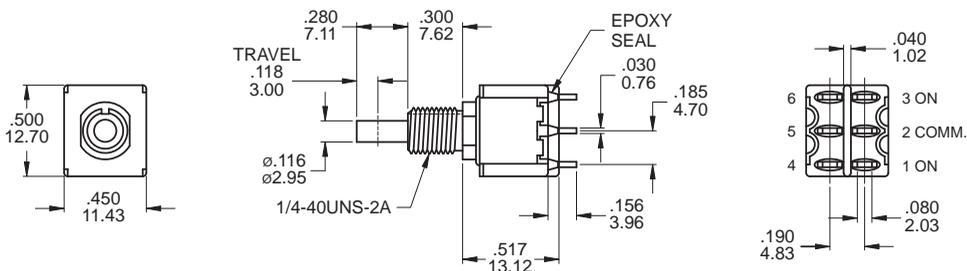
MOM=MOMENTARY

### POLE OPTIONS



#### SPDT

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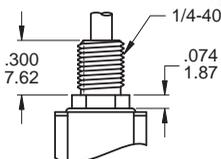
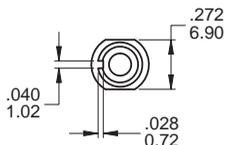


#### DPDT

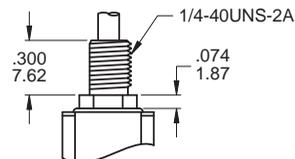
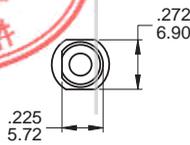
Part No. Shown : 7MDLP1B60M1QE

### BUSHING OPTIONS

B60 THD STD  
B70 NON-THD



B61 THD STD  
B71 NON-THD



7M(LOCK)  
Pushbutton Switches

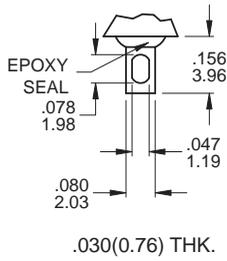


# 7M Series

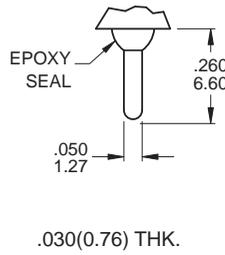
Snap-Acting Pushbutton Switches

## TERMINATION OPTIONS

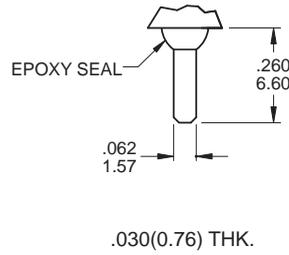
### M1 Solder lug



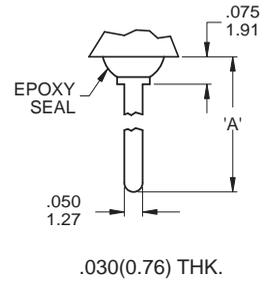
### M2 PC Thru-hole



### M3 Quick connect



### M5 Wire Wrap



## OTHER TERMINATION OPTIONS

**M6** Right angle P.C. Mount

**M7** Right angle P.C. Mount

**VS2** Vertical bracket P.C. Mount

**VS3** Vertical bracket P.C. Mount

**M6N** Right angle P.C. Mount

Snap-in bracket

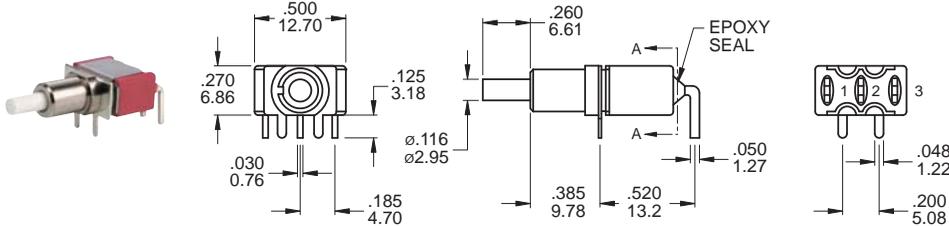
**V2N** Vertical bracket P.C. Mount

Snap-in bracket

OPTION CODE	DIM. 'A'
M51	.750 (19.50)
M52	.964 (24.48)
M53	.426 (10.80)
M54	.650 (16.50)

## TERMINATION OPTIONS

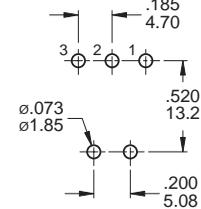
### M6



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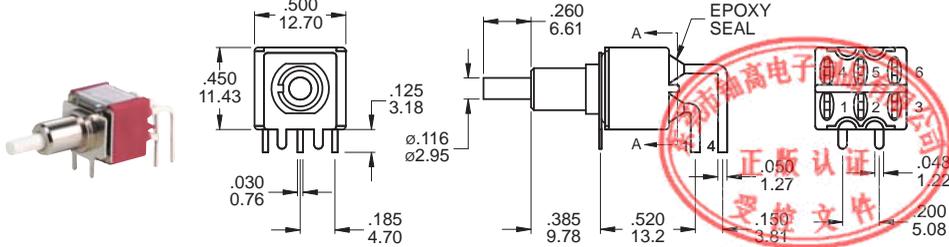
SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

### P.C. MOUNTING



### SPDT

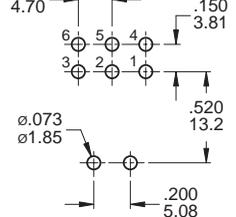
### M6



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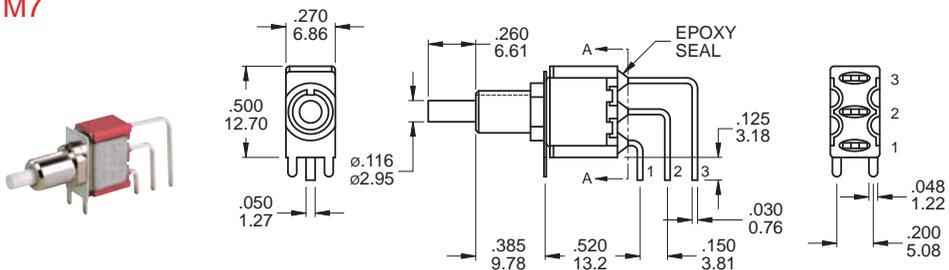
SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

### P.C. MOUNTING



### DPDT

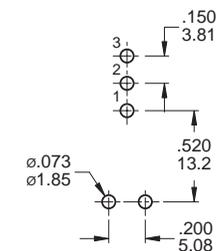
### M7



Part No. Shown : 7MSLP1B70M7QE

SECTION A-A  
TERM.NOS.FOR  
REFERENCE ONLY

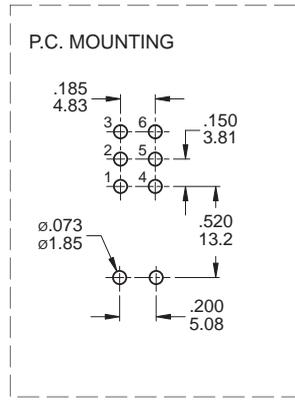
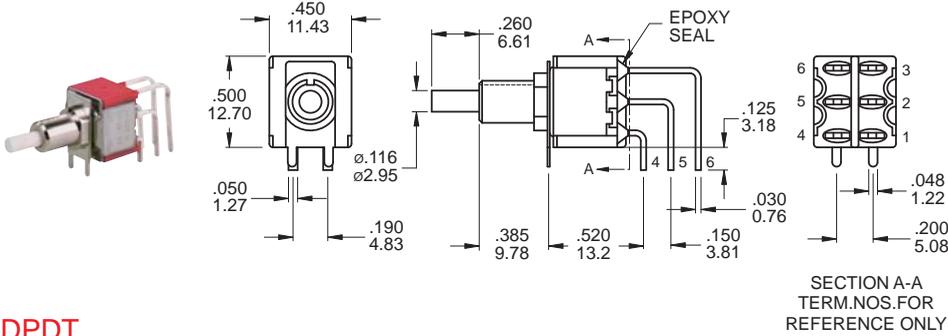
### P.C. MOUNTING



### SPDT

7M(LOCK) Pushbutton Switches

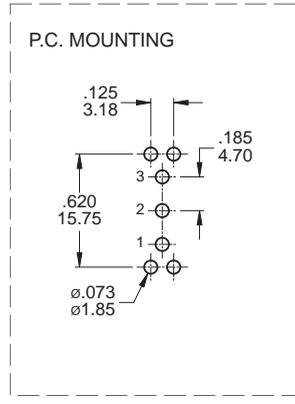
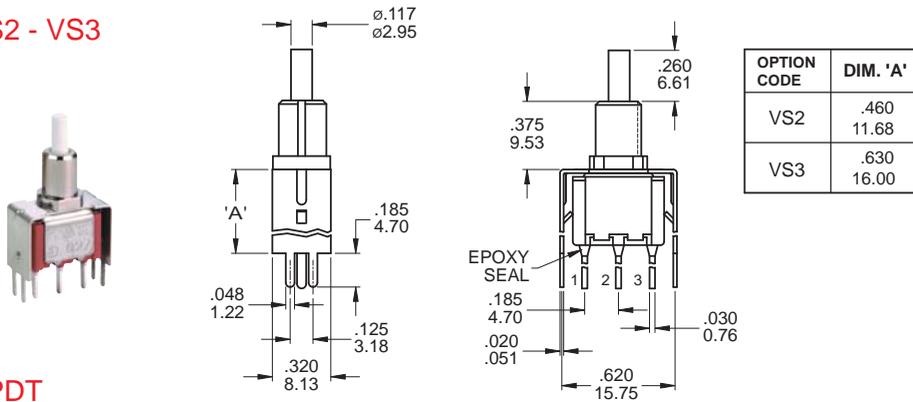
## M7



## DPDT

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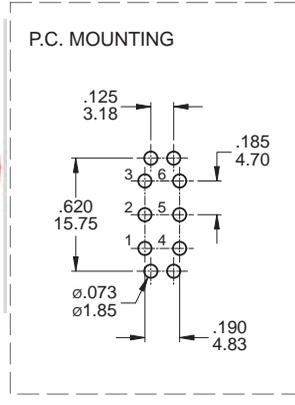
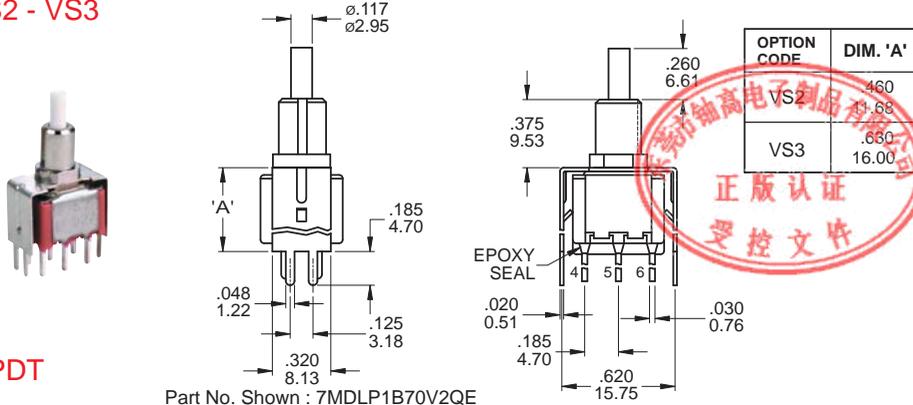
## VS2 - VS3



## SPDT

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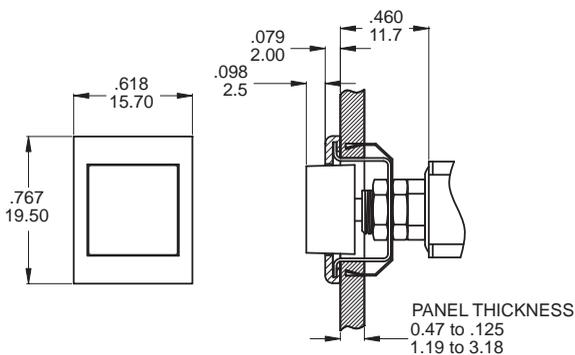
## VS2 - VS3



## DPDT

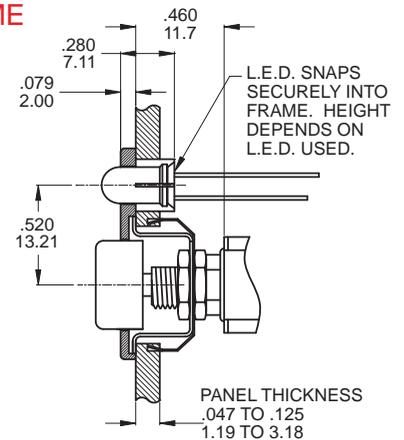
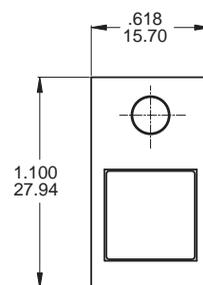
Part No. Shown : 7MDLP1B70V2QE

## AP2 CAP & FRAME



## AP5 CAP & FRAME

LED color see page102



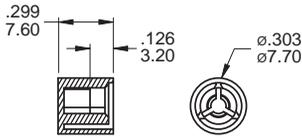
# 7M Series

Snap-Acting Pushbutton Switches

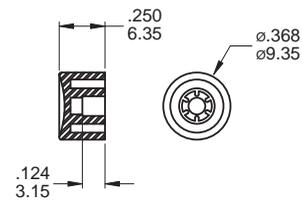
## CAP OPTIONS

For 7M,7A Series Only, Cap Standard Clors: White, Black, Green, Red

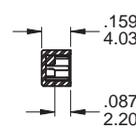
C1



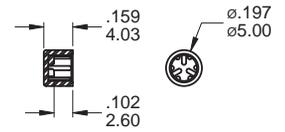
C2



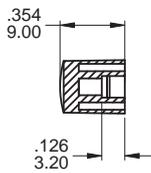
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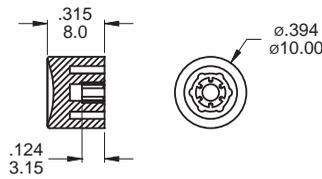
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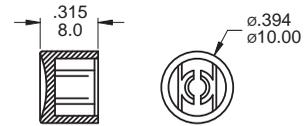
C6



C7

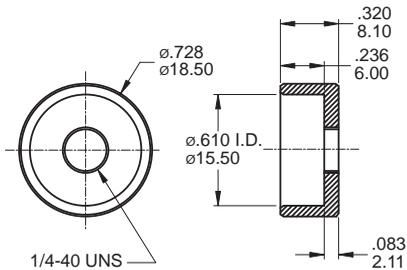


KC for PC actuator only



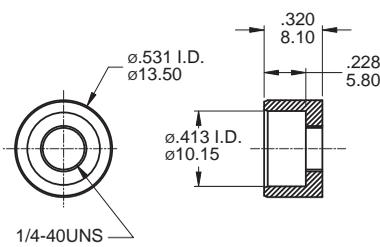
## DRESS NUTS

HDW21



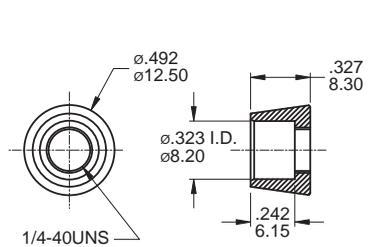
MNU-1M19

HDW22 for C2 Cap



MNU-1M20

HDW23 for C1 Cap



MNU-1M21

## CONTACT MATERIAL OPTIONS

	CONTACT PLATING	TERMINAL PLATING	RATINGS
Q	Silver *7MSL/7MDL with gold over silver for plating	Q = Silver	3 Amps with resistant load @ 120VAC or 28VDC
C	Gold over Silver	C = Gold over silver	1 Amps with resistant load @ 250VAC
R	Gold	R = Gold	0.4 Volt - Amps ( VA ) max. @ 20V max. ( AC or DC )

## SOLDERING PROCESSES

**MANUAL SOLDERING:** Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds while applying solder.

**WAVE SOLDERING:** Recommended Soldering Temperature: 270 ± 5°C

Duration of Solder Immersion: Max 5 sec. (PCB is 1.6mm in thickness)