

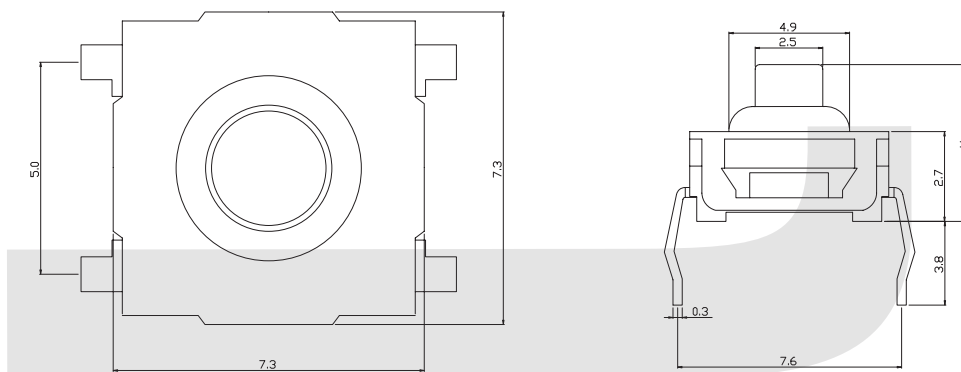
Switch

Tact Switch Series

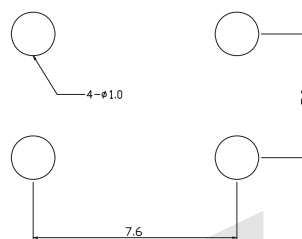
KLS7-TS7701 7x7 Water-proof Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12VDC
2. Contact Resistance : 50mΩ max(initial)
3. Insulation Resistance: 100MΩ(minDC 250V)
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 100000cycles
6. Environment temperature: -20°C~+70°C
7. Operating Force: 180/250(±30gf)
8. Seal temperature: 260°C~ 280°C



H1=4.3mm
H2=5.0mm



PCB LAYOUT

ORDER INFORMATION

KLS7-TS7701 - H1 - 180

Part Number

Operating Force :180~250gf

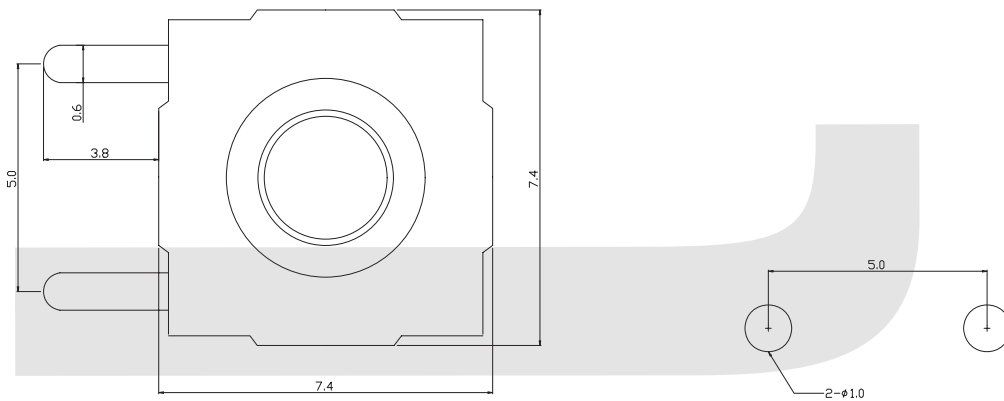
Hight: H1=4.3mm H2=5.0mm

Tact Switch Series

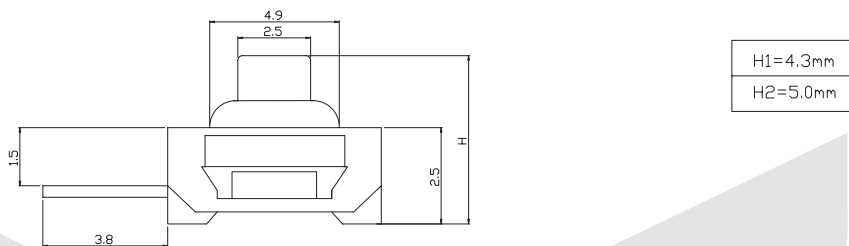
KLS7-TS7702 7x7 Water-proof Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12VDC
2. Contact Resistance : 50mΩ max(initial)
3. Insulation Resistance: 100MΩ(minDC 250V)
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 100000cycles
6. Environment temperature: -20°C~+70°C
7. Operating Force: 180/250(±30gf)
8. Seal temperature: 260°C~ 280°C



PCB LAYOUT



ORDER INFORMATION

KLS7-TS7702 - H1 - 180

Part Number

Operating Force :180~250gf

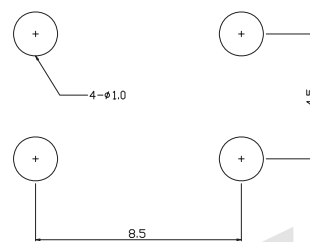
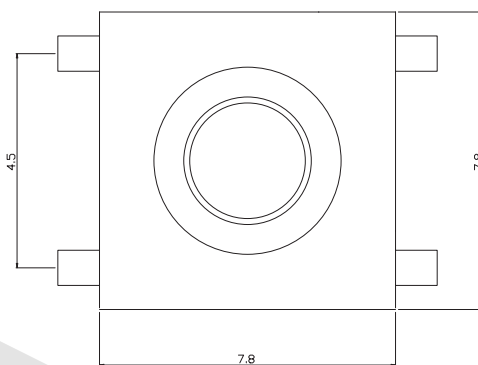
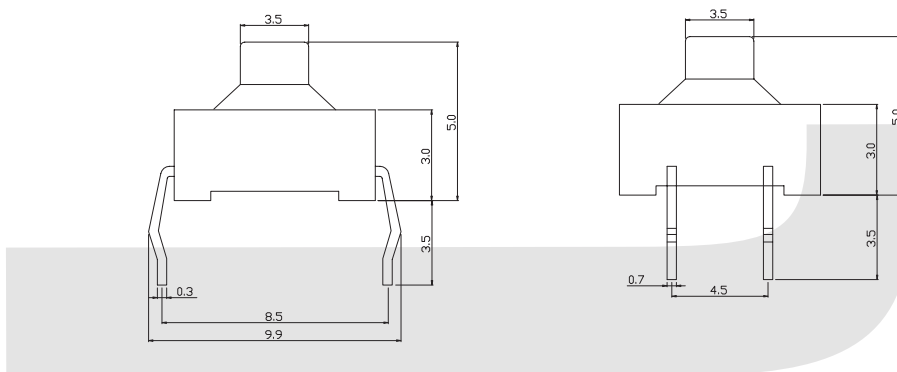
Hight: H1=4.3mm H2=5.0mm

Tact Switch Series

KLS7-TS7703 8x8 Water-proof Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12VDC
2. Contact Resistance : 50mΩ max(initial)
3. Insulation Resistance: 100MΩ(minDC 250V)
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 100000cycles
6. Environment temperature: -20°C~+70°C
7. Operating Force: 180/250(±30gf)
8. Seal temperature: 260°C~ 280°C



PCB LAYOUT

ORDER INFORMATION

KLS7-TS7703 - H1 - 180

Part Number

Operating Force :180~250gf

Hight: H1=5.0mm

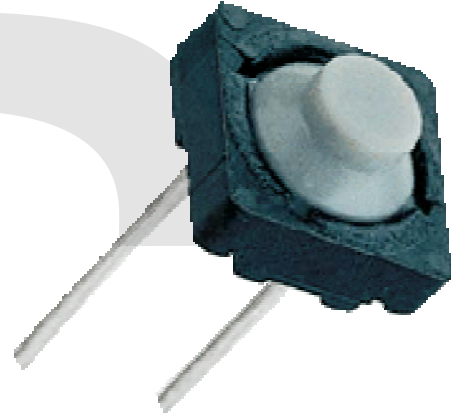
Switch

Tact Switch Series

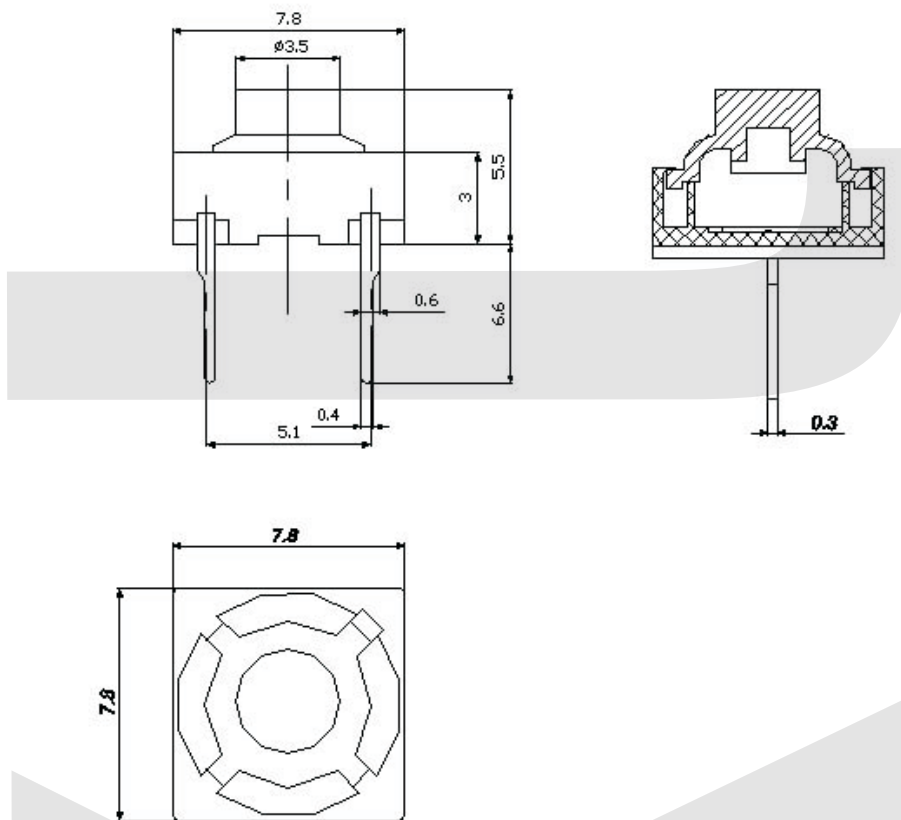
KLS7-TS7705 8x8 Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12Vdc
2. Contact Resistance : 100mΩ Max.
3. Insulation Resistance: 100MΩ Min.
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 50, 000cycles
6. Environment temperature: -25°C~+70°C
7. Operating Force: 120±30gf
8. Seal temperature: 260°C~ 280°C



VII



ORDER INFORMATION

KLS7-TS7705 - H1 - 120 -B

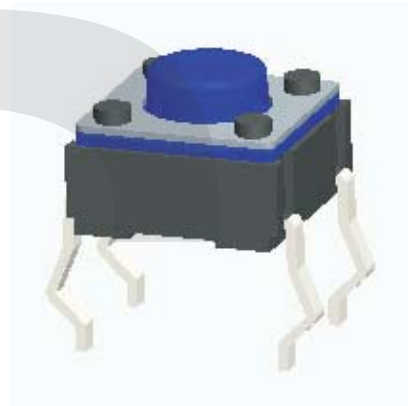
Part Number Packing: B-Bulk
Operating Force : 120gf
High: H1=5.5mm

Tact Switch Series

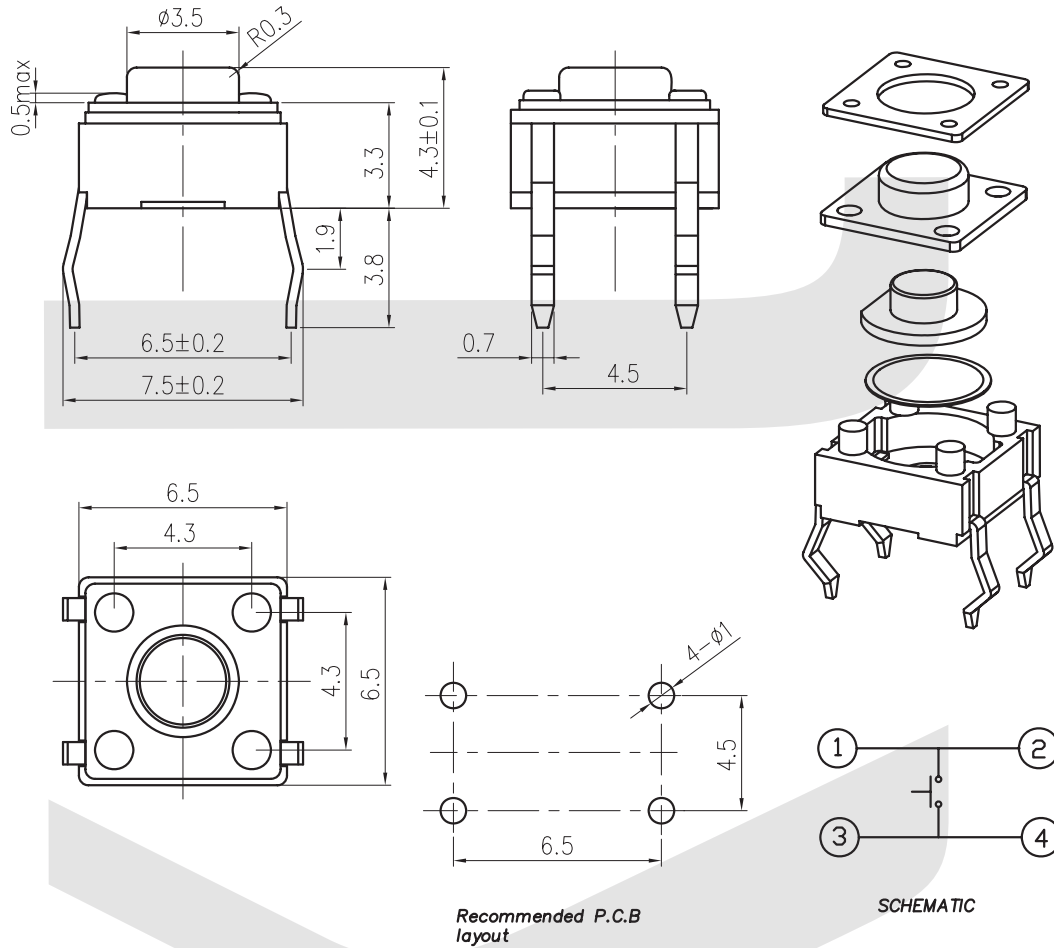
KLS7-TS7706 Tact Switch Series

ELECTRICAL

- 1.Rating: 50mA 12Vdc
- 2.Contact Resistance : 50mΩ Max.
- 3.Insulation Resistance: 100MΩ Min.
- 4.Dielectric Strength : AC250V(50/60Hz for 1minute)
- 5.Electrically Life: 80, 000cycles
- 6.Environment temperature:-25°C~+70°C
- 7.Operating Force: 250±30gf
- 8.Seal temperature:260°C~ 280°C



VII



ORDER INFORMATION

KLS7-TS7706 - H1-250 -B

Part Number

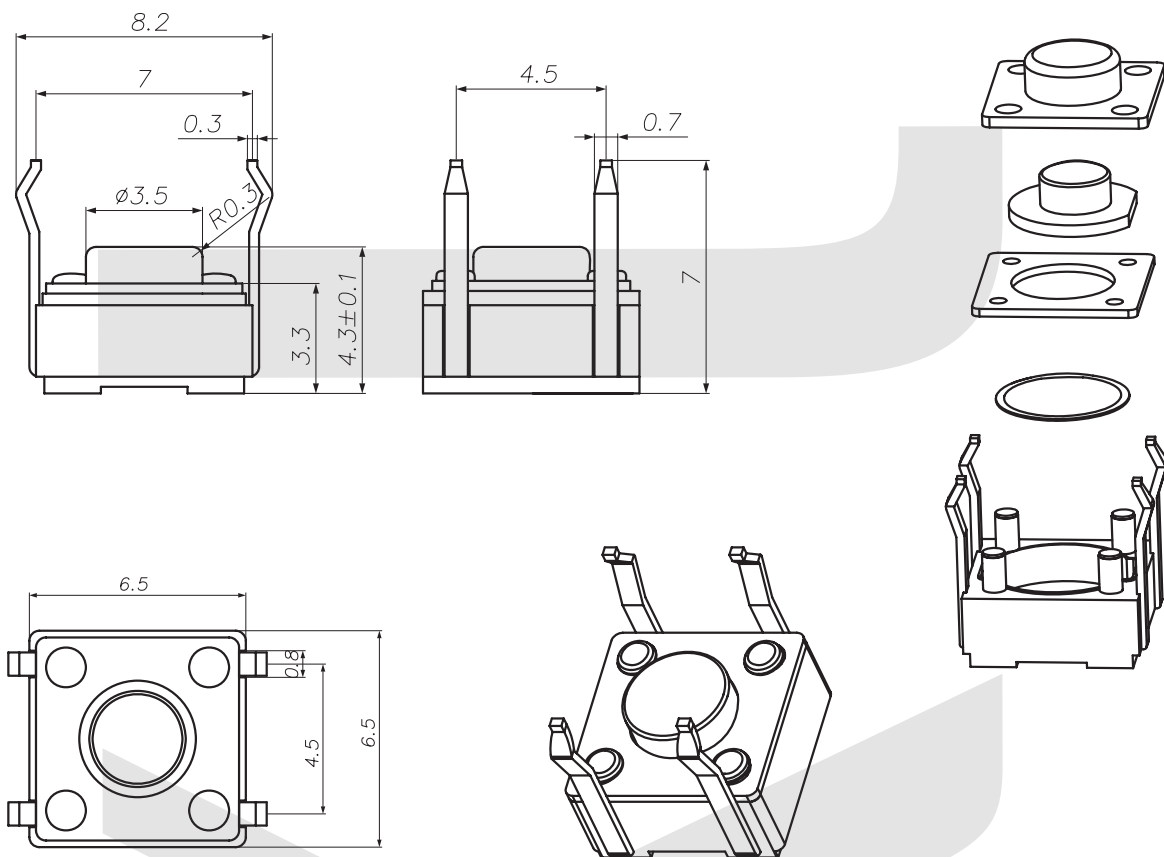
Packing: B-Bulk
Operating Force :250~280gf
Hight: H1=4.3mm

Tact Switch Series

KLS7-TS7707 Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12Vdc
2. Contact Resistance : 50mΩ Max.
3. Insulation Resistance: 100MΩ Min.
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 80, 000cycles
6. Environment temperature: -25°C~+70°C
7. Operating Force: 250±30gf
8. Seal temperature: 260°C~ 280°C



ORDER INFORMATION

KLS7-TS7707 - H1-250 -B

Part Number

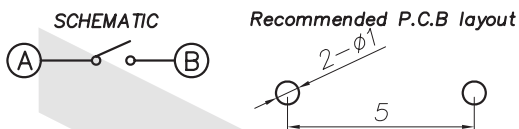
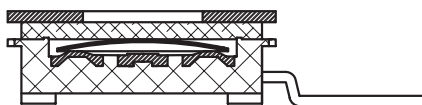
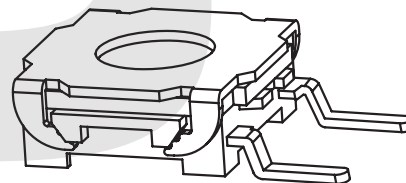
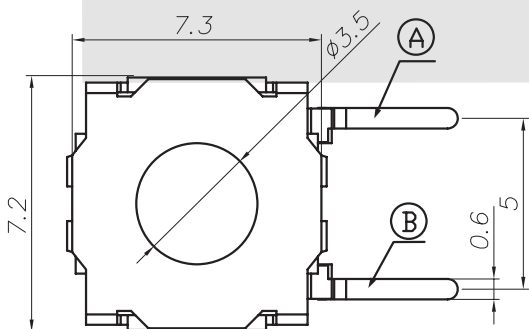
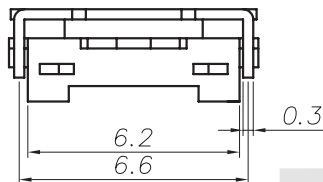
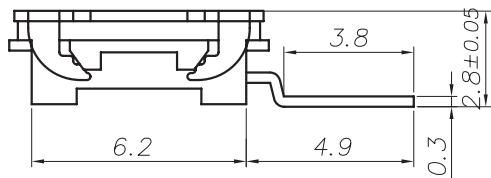
Packing: B-Bulk
Operating Force :250~280gf
Hight: H1=4.3mm

Tact Switch Series

KLS7-TS7708 Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12Vdc
2. Contact Resistance : 50mΩ Max.
3. Insulation Resistance: 100MΩ Min.
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 80, 000cycles
6. Environment temperature: -25°C~+70°C
7. Operating Force: 180~250±30gf
8. Seal temperature: 260°C~ 280°C



ORDER INFORMATION

KLS7-TS7708 - H1-250 -B

Part Number

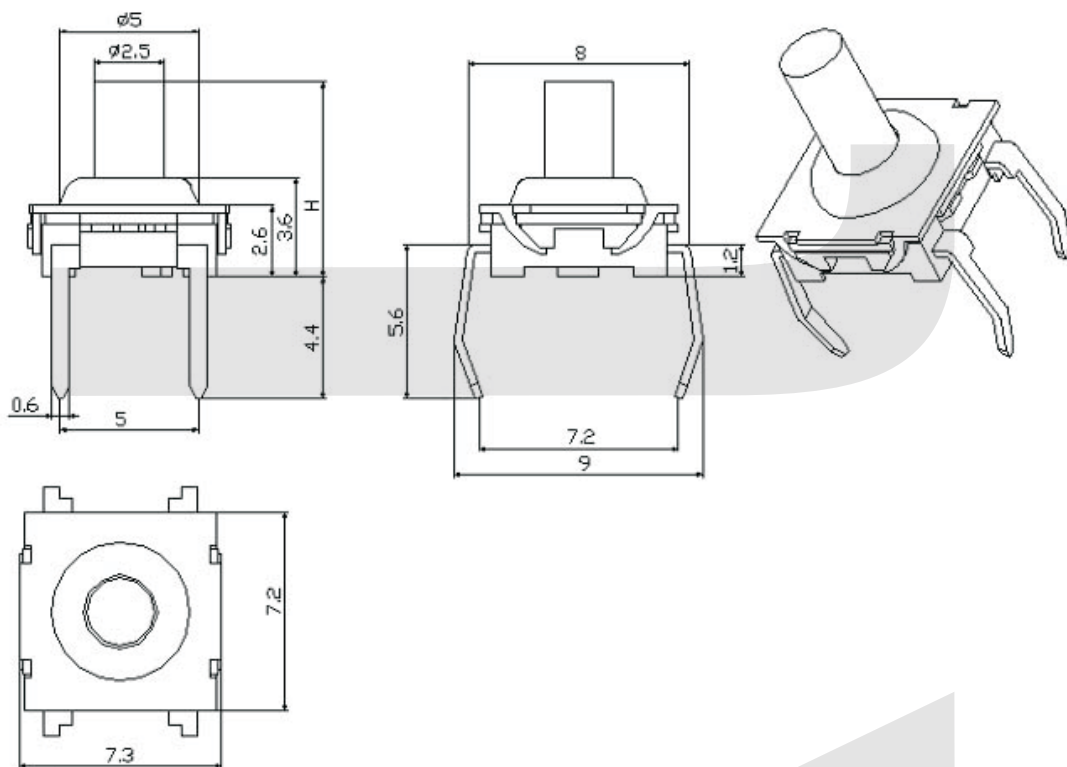
Packing: B-Bulk
Operating Force :180~250gf
Hight: H1=2.8mm

Tact Switch Series

KLS7-TS7709 Tact Switch Series

ELECTRICAL

- 1.Rating: 50mA 12Vdc
- 2.Contact Resistance : 50mΩ Max.
- 3.Insulation Resistance: 100MΩ Min.
- 4.Dielectric Strength : AC250V(50/60Hz for 1minute)
- 5.Electrically Life: 80, 000cycles
- 6.Environment temperature:-25°C~+70°C
- 7.Operating Force: 180~250±30gf
- 8.Seal temperature:260°C~ 280°C



ORDER INFORMATION

KLS7-TS7709 - H1-250 -B

Part Number

Packing: B-Bulk

Operating Force :180~250gf

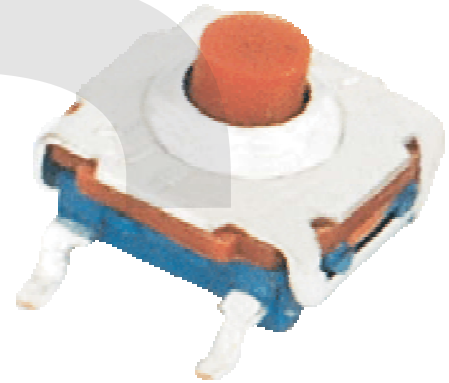
Height: H1=5.0mm H2=9.9mm

Tact Switch Series

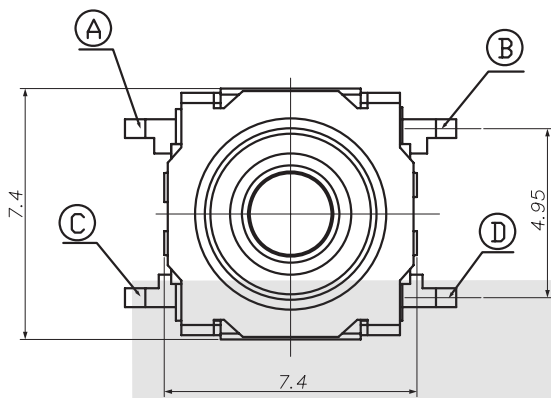
KLS7-TS7710 Tact Switch Series

ELECTRICAL

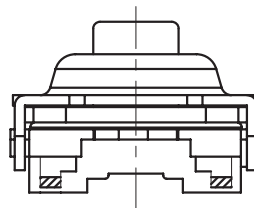
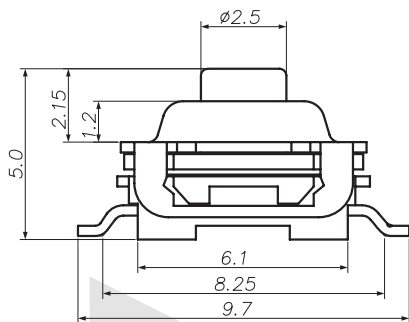
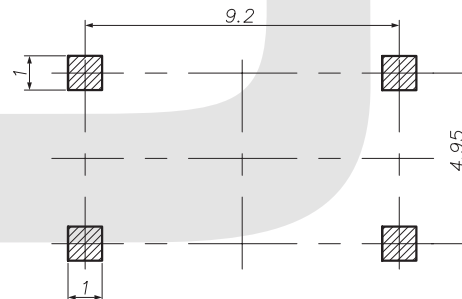
- 1.Rating: 50mA 12Vdc
- 2.Contact Resistance : 50mΩ Max.
- 3.Insulation Resistance: 100MΩ Min.
- 4.Dielectric Strength : AC250V(50/60Hz for 1minute)
- 5.Electrically Life: 80, 000cycles
- 6.Environment temperature:-25°C~+70°C
- 7.Operating Force: 180~250±30gf
- 8.Seal temperature:260°C~ 280°C



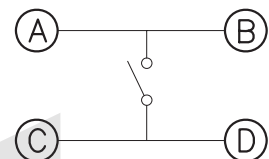
VII



Recommended P.C.B layout



SCHEMATIC



ORDER INFORMATION

KLS7-TS7710 - H1-250 -B

Part Number

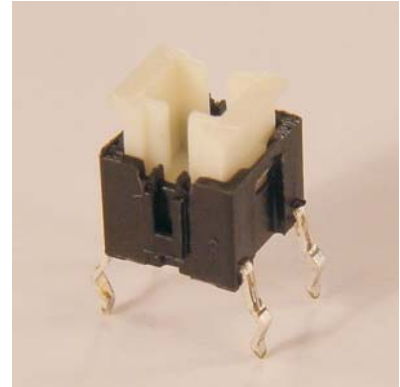
Packing: B-Bulk T-Tape
Operating Force :180~250gf
Height: H1=5.0mm

DIP Switch Series

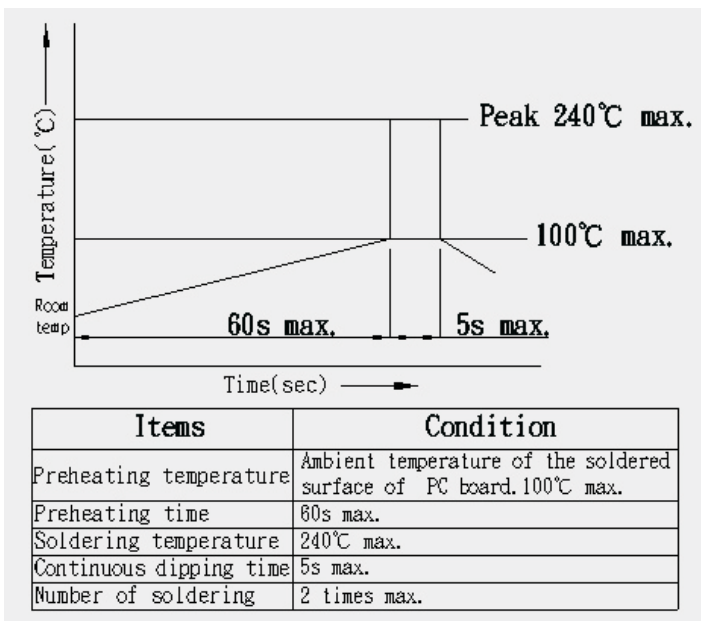
KLS7-TSE2

SPECIFICATIONS

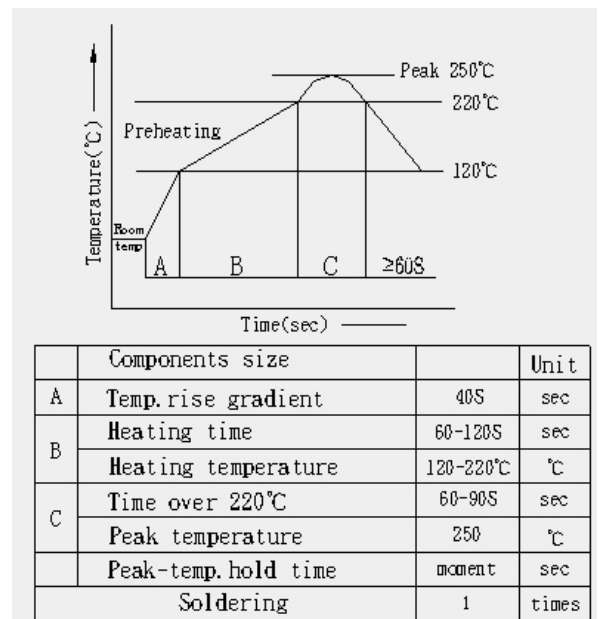
- Contact Rating:50mA@12 VDC
- Electrical life:1,000,000cycles
- Mechanical life:1,000,000 cycles min
- Position Travel:0.25 0 .1
- Insulation Resistance: > 100MΩ DC250V
- Withstand Voltage:AC250V 1 minute
- Contact Resistance: < 100mΩ
- Ambient Temper : -25°C to70°C
- Operating Force: 80 2 0 gf ; 120 3 0 gf ; 180 5 0 gf
- Soldering Process :
 - Hand soldering : Use a soldering iron of 30 watts, controlled at 380°C approximately 3 seconds while applying solder.
 - Wave soldering: When applying wave soldering, the peak temperature of the wave Oven should be set to 260°Cmax.
 - Condition for soldering (Wave & Non-washable Type) Temperature Profile: (Figure 1)
 - Reflow soldering: When applying reflow soldering, the peak temperature of the reflow Oven should be set to 250°Cmax.
 - Condition for soldering (Reflow & Non-washable Type) Temperature Profile: (Figure 2)



VII



Wave soldering (Figure 1)



Reflow soldering (Figure 2)

ORDER INFORMATION

HOW TO ORDER

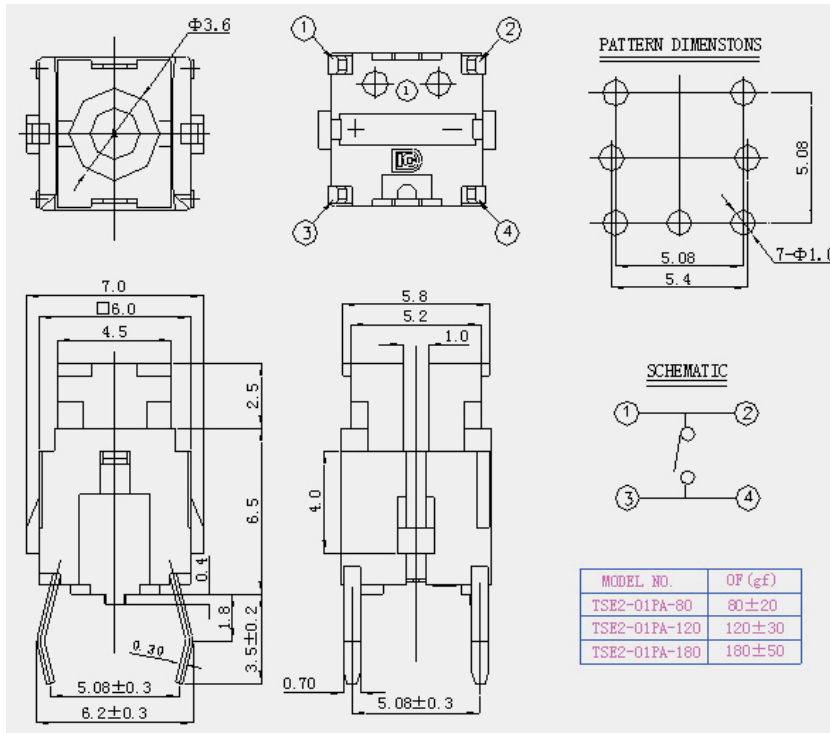
Series	Actuator Button	Terminal type	Base type	Operating Force	LED Color
TSE2	01= 01 Type	P = PCB terminal M=SMT	A / B	80=80±20 (gf) 120=120±30 (gf) 180=180±50 (gf)	None/no LED Red, Green Red/yellow White, RW=red/white RB=red/blue, RBG=red/green BY=blue/yellow GB=green/blue YB=yellow/blue YG=yellow/green W=white/yellow

EXAMPLE: TSE2-01PA-80; TSE2-01PB-80; TSE2-01MA-80; TSE2-01MB-80

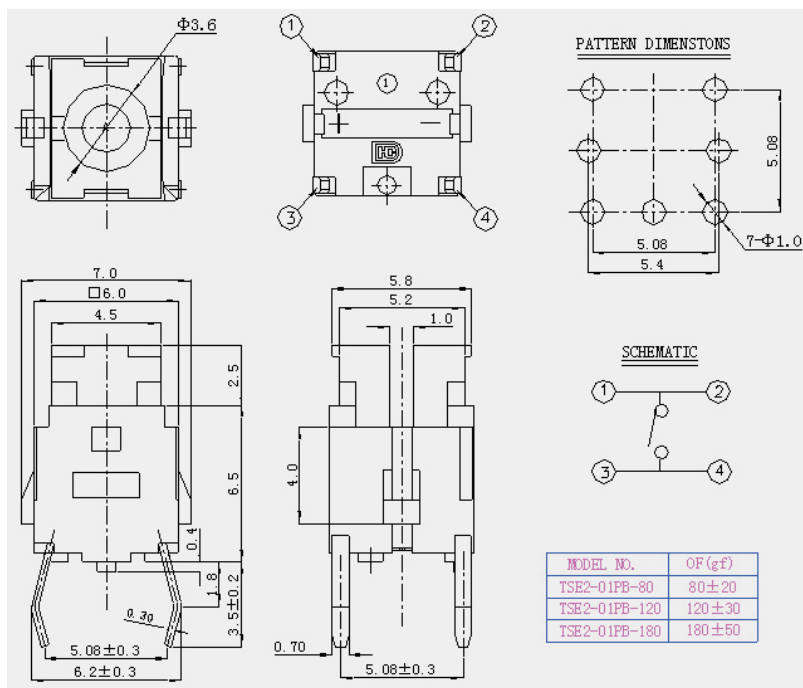
Switch

TERMINAL AND COVER OPTIONS

TSE2 Series TACT SWITCH



TSE2-01PA

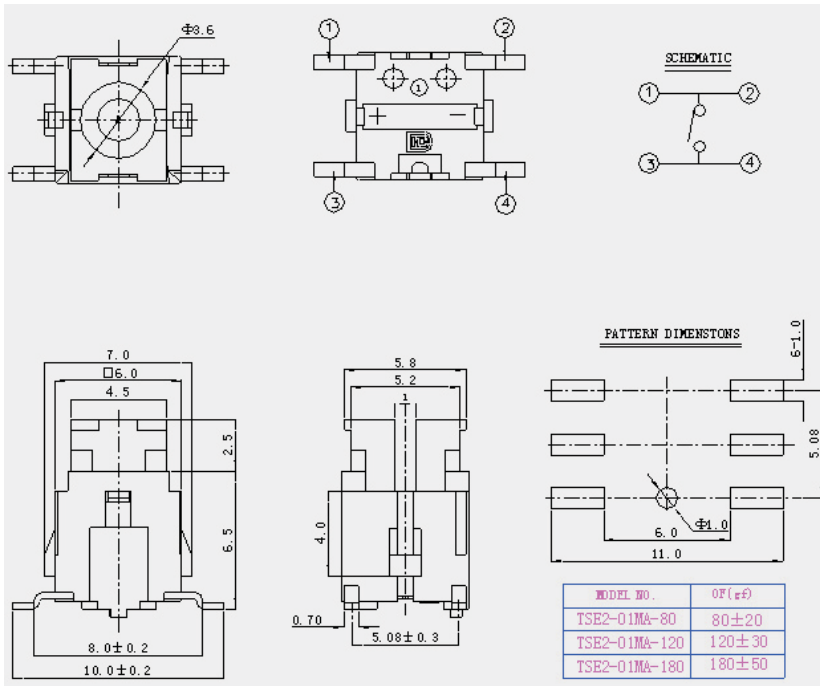


TSE2-01PB

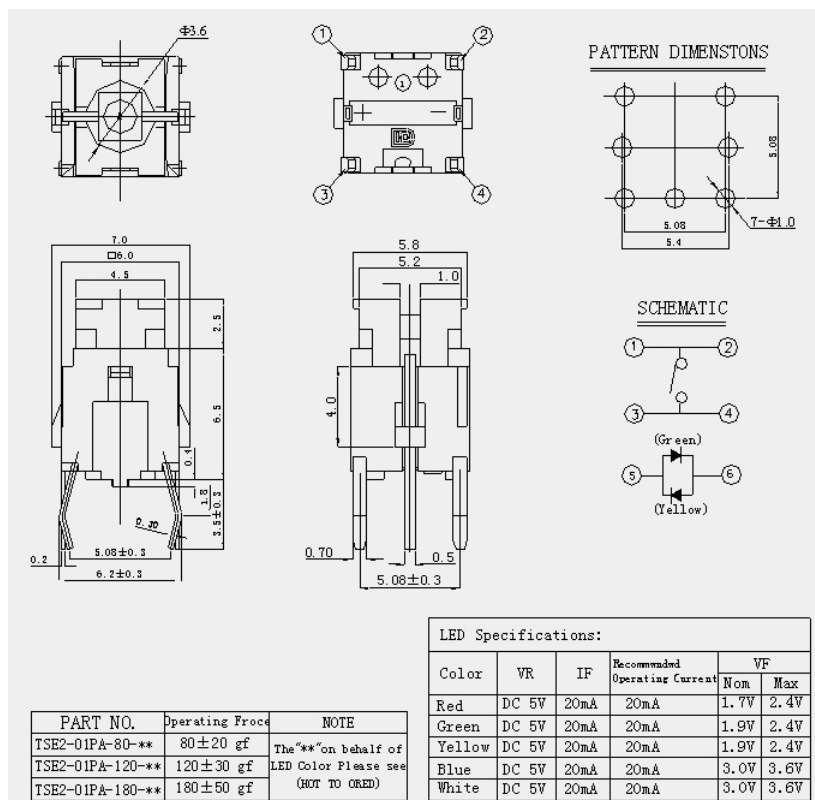
Switch

TERMINAL AND COVER OPTIONS

TSE2 Series TACT SWITCH



TSE2-01MA

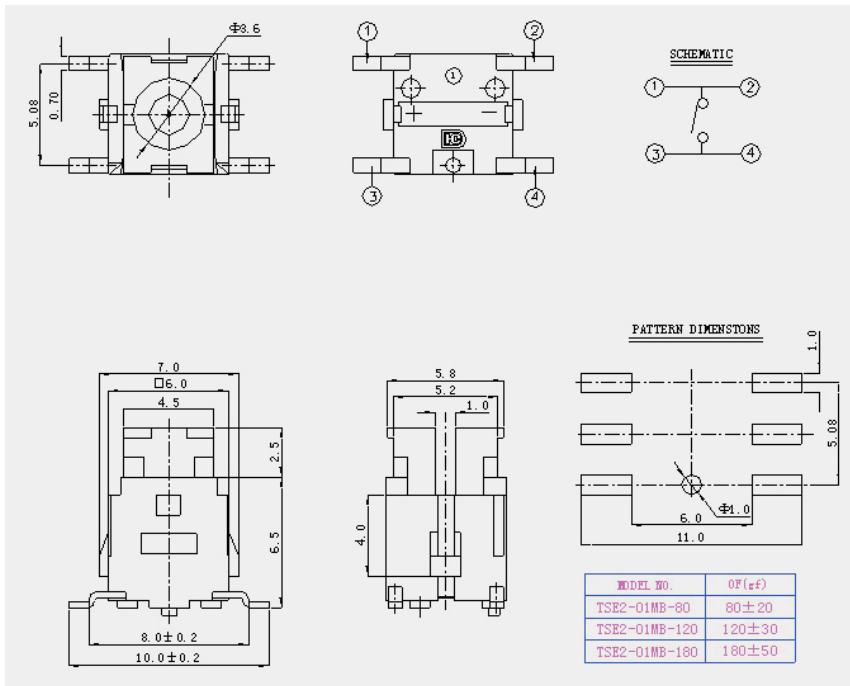


TSE2-01 PA

Switch

TERMINAL AND COVER OPTIONS

TSE2 Series TACT SWITCH

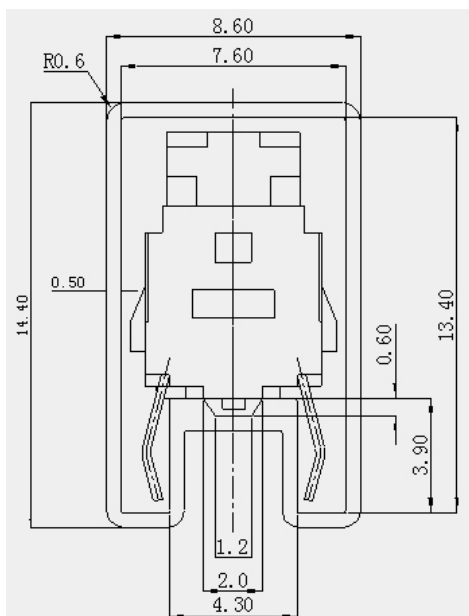


TSE2-01MB

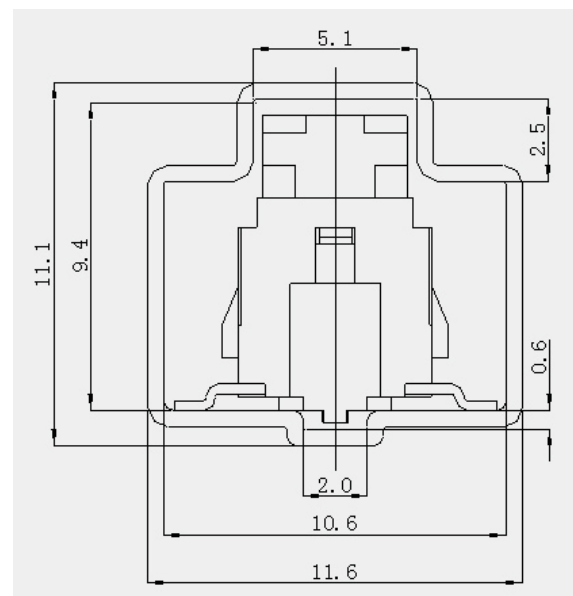
PACKING EXPLANATION :

- ①60,000 PCS for one big box(1,000 PCS for one bag, 10bags for one small carton,6 small cartons for one big box.)
- ②Canal packaging : 80 switch shall be packed in a strip ;Ten(10) strips at maximum shall be packed in a bag.

Canal form and dimensions



TSE2-P**



TSE2-M**

Switch

Tact Switch Series

KLS7-TS7711 7x7mm Tact Switch Series

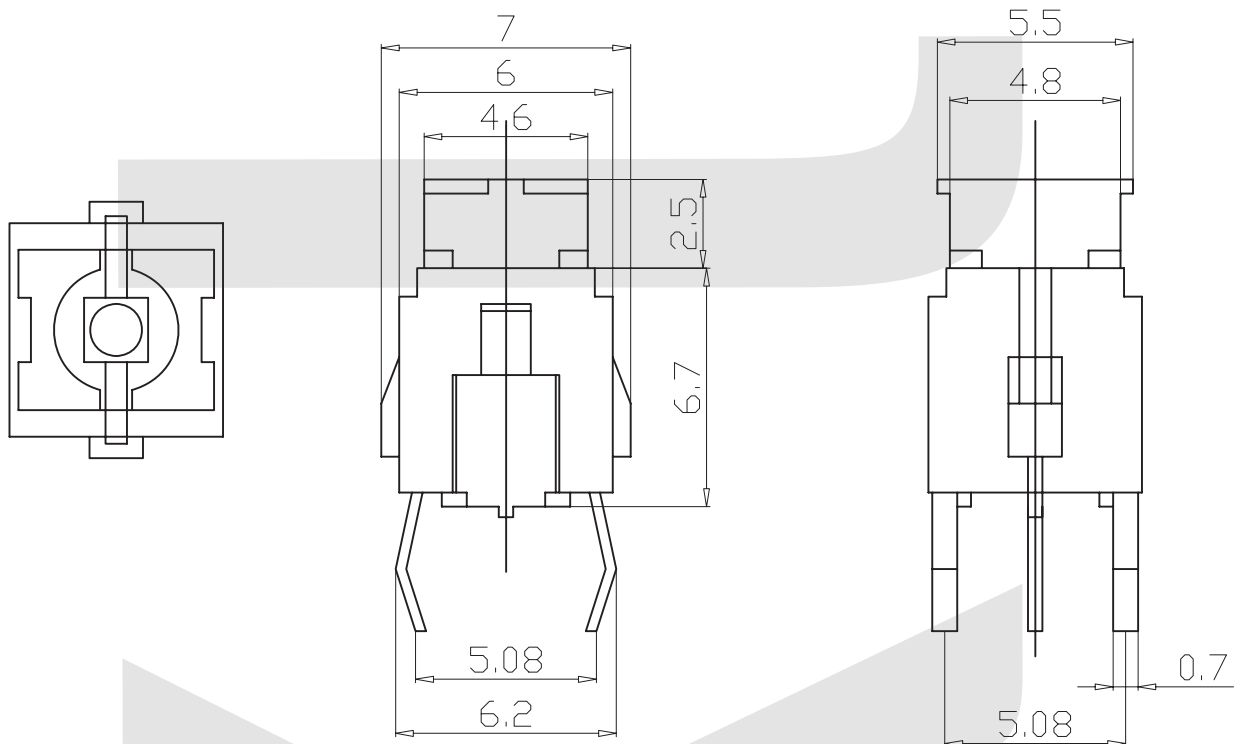
ELECTRICAL

- 1.Rating: 50mA 12Vdc
- 2.Contact Resistance : 50mΩ Max.
- 3.Insulation Resistance: 100MΩ Min.
- 4.Dielectric Strength : AC250V(50/60Hz for 1minute)
- 5.Electrically Life: 50, 000cycles
- 6.Environment temperature:-25°C~+70°C
- 7.Operating Force: 250±30gf
- 8.Seal temperature:260°C~ 280°C



VII

Dimension (unit: mm)



ORDER INFORMATION

KLS7-TS7711 -9.2-260-R

Series No.
High: 9.2mm

Color:R=Red Y=Yellow
G=Green B=Blue
Operating Force :280gf

Switch

Tact Switch Series

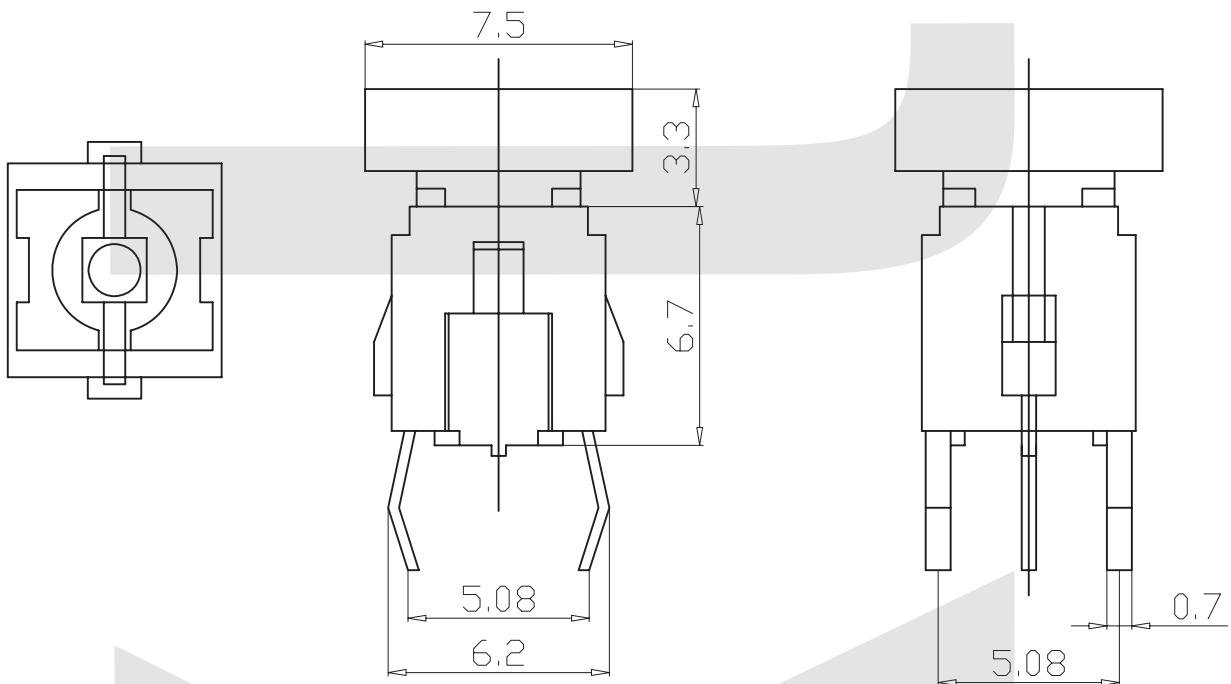
KLS7-TS7712 7.5x7.5mm Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12Vdc
2. Contact Resistance : 50mΩ Max.
3. Insulation Resistance: 100MΩ Min.
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 50, 000cycles
6. Environment temperature: -25°C~+70°C
7. Operating Force: 250±30gf
8. Seal temperature: 260°C~ 280°C



Dimension (unit: mm)



ORDER INFORMATION

KLS7-TS7712 -10.0-260-R

Series No. _____
High: 10.0mm

Color: R=Red Y=Yellow
G=Green B=Blue
Operating Force :280gf

Tact Switch Series

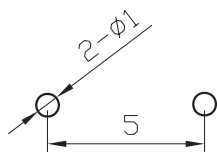
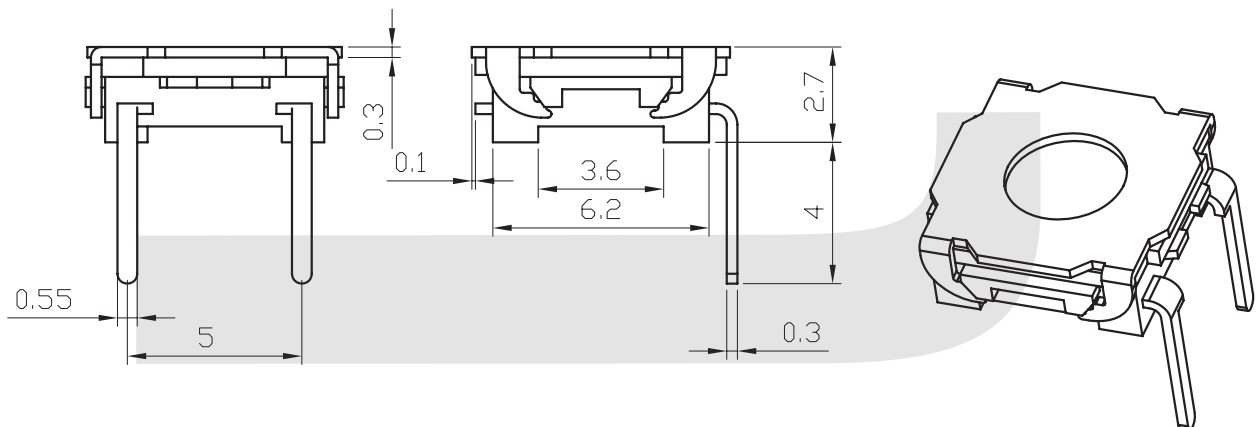
KLS7-TS7715 7x7 Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12Vdc
2. Contact Resistance : 50mΩ Max.
3. Insulation Resistance: 100MΩ Min.
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 100, 000cycles
6. Environment temperature: -25°C~+70°C
7. Operating Force: 120±20gf
8. Seal temperature: 260°C~ 280°C



Dimension (unit: mm)



P.C.B layout



SCHEMATIC

ORDER INFORMATION

KLS7-TS7715 -2.7 - 120

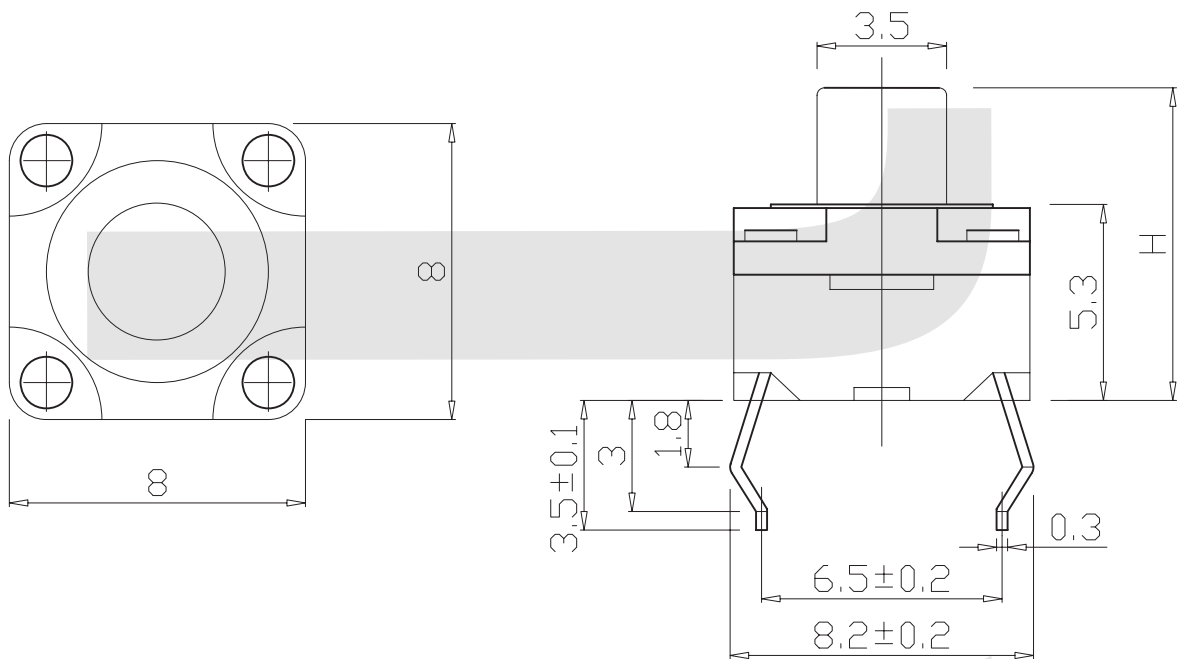
Series No. _____
High: 2.7mm _____ Operating Force :120gf

Tact Switch Series

KLS7-TS7716 8x8 Tact Switch Series

ELECTRICAL

1. Rating: 50mA 12Vdc
2. Contact Resistance : 100mΩ Max.
3. Insulation Resistance: 100MΩ Min.
4. Dielectric Strength : AC250V(50/60Hz for 1minute)
5. Electrically Life: 50, 000cycles
6. Environment temperature: -25°C~+70°C
7. Operating Force: 160~250±50gf
8. Seal temperature: 260°C~ 280°C
9. Waterproof to IEC529 seven performance standards
10. In the high humidity environment or the possibility of condensation in the context of its use, in order to prevent leakage current between terminals, be sure the switch is installed to cover the terminal to be coated



ORDER INFORMATION

KLS7-TS7716 - H1 - 160 -B

Part Number

Packing: B-Bulk

Operating Force : 160~250gf

High: H1=7.5mm H2=12.0mm

Tact Switch Series

KLS7-TS7717 7×7 Tach Switch Series

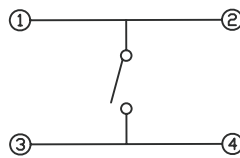
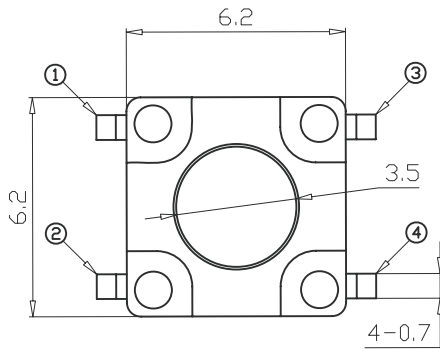


ELECTRICAL

1. Rating: 50mA 12VDC
2. Contact Resistance: 100M ΩMax
3. Insulation Resistance: 100M ΩMin
4. Dielectric Strength : AC250V(50/60Hz for 1 mminute
5. Electrically Life: 100000cycles
6. Environment temperature:-20 C~+70 C
7. Operating Force: 160/250(±50gf)
8. Seal temperature:260 C~ 280 C

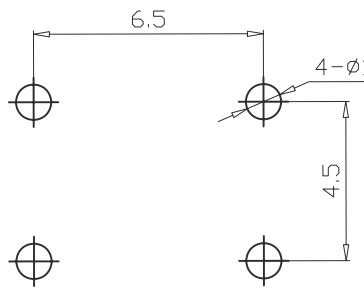
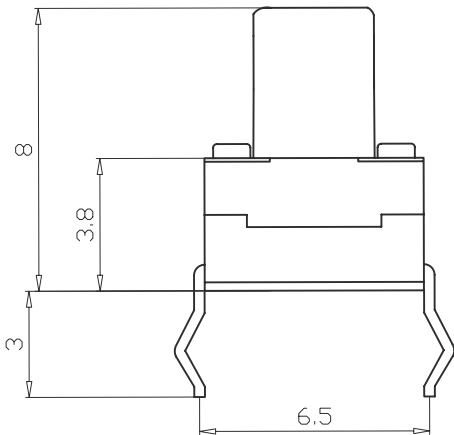


Dimension (unit: mm)



Circuit diagram

H
4.3
5.0
6.0
7.0
7.5
8.5
9.0
9.5
11.0



PCBLAYOUT

ORDER INFORMATION

KLS7-TS- 7717 -4.3 -180

Series No.

Operating Force:160/250 gf

Hight: 4.3mm/5.0mm/6.0mm/7.0mm
7.5mm/8.0mm/8.5mm/9.0mm
9.5mm/11.0mm