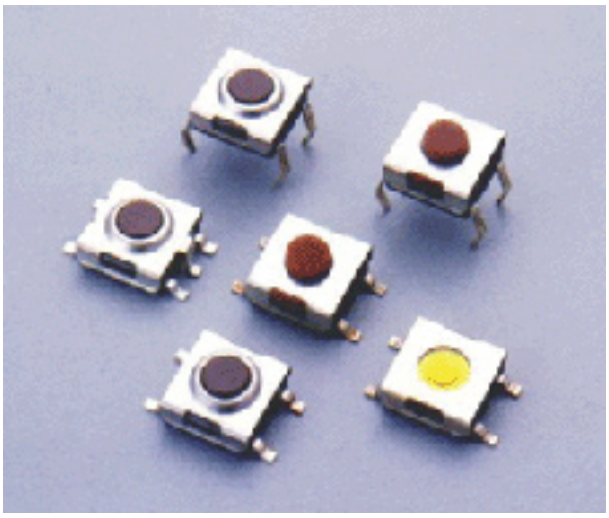
SWITCH HILL

RoHS Compliant
Pb Free

Tact Switches

STSHW-6, STSMW-6 & STSGMW Series

(SMD & Dip) Washable (6.2 x 6.2mm)



FEATURES:

• Sharp click feel with a positive tactile feedback. Due to a small movement distance (stroke), user experiences distinct sensation when the switch “clicks” into place.

• Ultraminiature and light weight structure suitable for high density mounting. Economic but high reliability.

• Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping.

• Seal characteristics:
a. The washable type switches allow submersed washing after soldering.
b. Proceed the cleaning process after the S/W temperature decreses to normal.
c. Degree of protection: IP46

MATERIAL:

• Cover: Stainless steel.
Nickel Silver (STSGMW-6□6)
• Base: UL94V-0 Nylon High Temp. Thermoplastic.
• Terminal: Brass with silver plated.
• Color: Black.

Part Number	Number per bag
STSHW-6□	-
STSGMW-6□6	2000
STSMW-6□6	2000
STSMW-6□8	2000
STSMW-6□9	1900
STSMW-6□5	1900
STSMW-6□7	900
STSMW-6□4	900

SPECIFICATION

MECHANICAL

• Operation Force:
360 ± 90gf Transparent (T), STSH(M)W -6□9, 6□7, 6□5
160 ± 50gf Silver (S), STSH(M)W -6□8
260 ± 50gf Red (R), STSH(M)W -6□9, 6□7, 6□5, 6□4
160 ± 50gf Brown (N), STS(M)W -6□9, 6□7, 6□5, 6□4
160 ± 50gf Brown (N), STS(M)W -6□6, STSGMW-6□6
• Stop Strenght: Max 3kgf vertical static load continuously for 15 seconds
• Stroke: 0.25 +0.2mm -0.1mm 6N6, 6S8
0.6 ± 0.2mm, 6□9,6T7
0.45 ± 0.2mm, 6□9,6□7,6N5, 6R5,6T5,6□4
• Operation Temperature Range: -25°C to +70°C
• Storage Temperature Range: -30°C to +80°C
• Vibration Test: MIL-STFD-202F METHOD 201A.
Frequency: 10-55-10Hz/1 minute
Directions: X,Y,Z, three mutually perpendicular directions.
Time: 2 hours each direction.
High reliability.
• Shock Test: MIL-STD-202F METHOD 213B
CONDITION A.
Gravity: 50G (peak value), 11 msec
Direction and times: 6 sides and 3 times in each direction.
High reliability.

ELECTRICAL

• Electrical Life:
500 000 cycles for STS□W-6□9,6N5, 6R5, 6T5, 6N4, 6R4
500 000 cycles for STS□W-6N7, 6R7, 6T7
100 000 cycles for STS□W-6N6, 6S8, STSGMW-6N6
• Rating: 50mA, 12VDC.
• Contact Resistance: 100mΩ max.
• Insulation Resistance: 100Ωmin. at 500VDC.
• Dielectric Strenght: 250VAC/1 minute.
• Contact Arrangement 1 pole 1 throw

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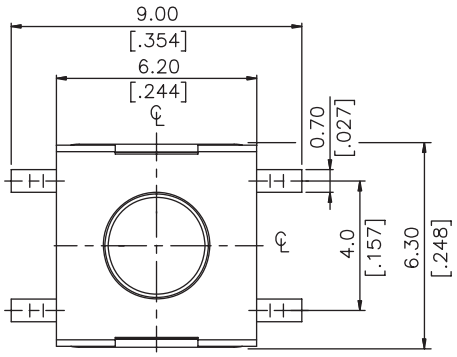
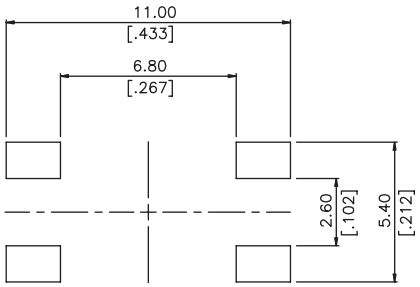
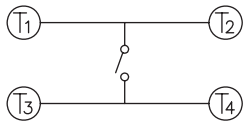
Item No.	STSGMW-6N6 STSHQ-6N6 STSMW-6N6	STSMW-6S8 STSHW-6S8	STS(H)MW- 6□9, 6N5, 6R5, 6T5	STS(H)MW-6N7, 6R7, 6T7
Stem	High-Temp Thermoplastic Nylon UL 94V-0 Color: Brown(N), 160gf	None	Silicone Rubber	Silicone Rubber
Adhesive Tape	Teflon	Teflon (Standard) Kapton (V-Option)	None	None
Metal Stem	Brass with Nickel plated	Brass with Nickel Plated	None	None
Filler	None	None	None	Nylon
Contact	Phosphor bronze with silver cladding (Standard)		Phosphor bronze with silver cladding (Standard)	Stainless Steel

STSMW-6□4, 6□5, 6□7 ,6□9

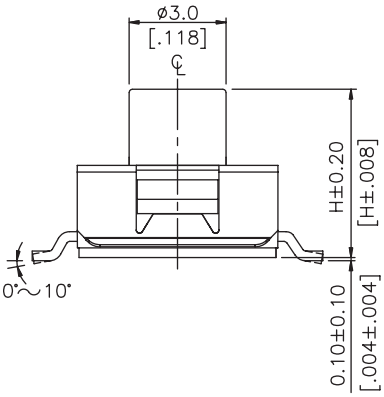


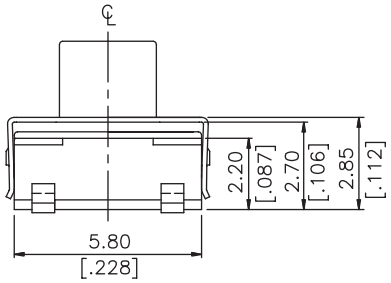


P.C.B. LAYOUT



CIRCUIT DIAGRAM





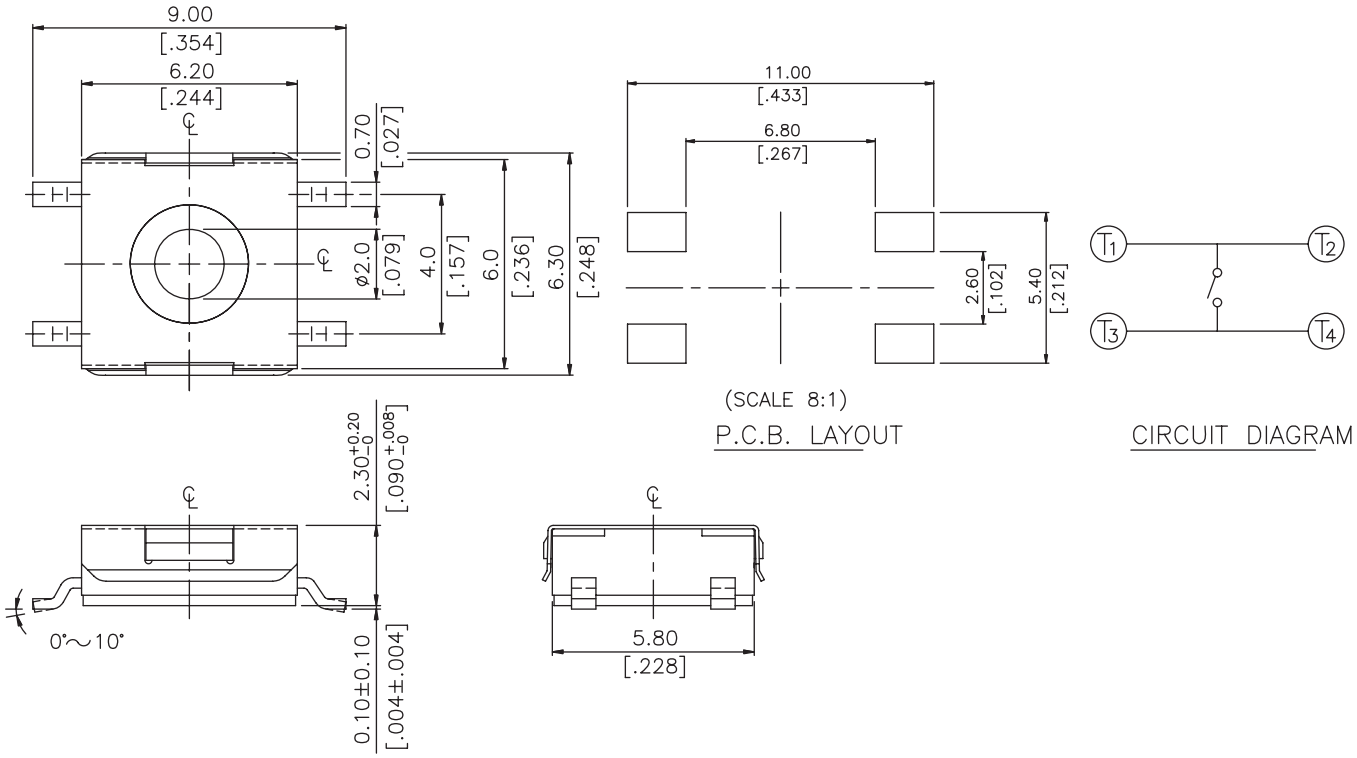
STSMW-6□9	3.8mm[.150]
STSMW-6□7	5.2mm[.205]
STSMW-6□5	3.5mm[.138]
STSMW-6□4	4.5mm[.177]
Part No.	H

Tact Switches

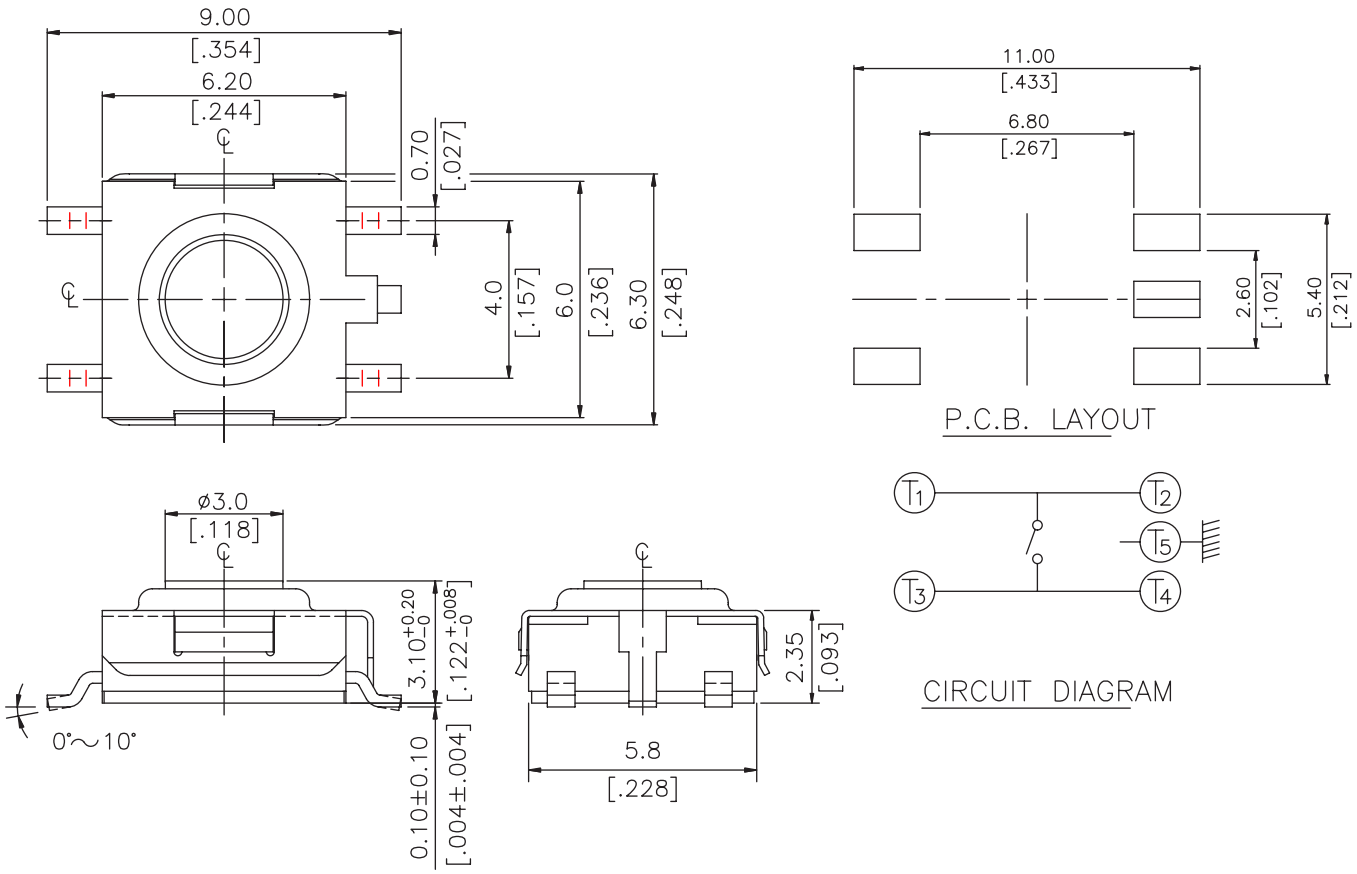
STSHW-6, STSMW-6 & STSGMW Series

(SMD & Dip) Washable (6.2 x 6.2mm)

STSMW-6□8



STSGMW-6□6



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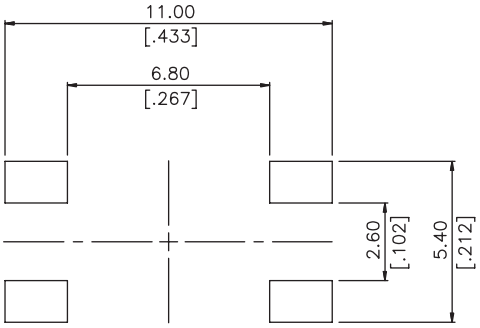
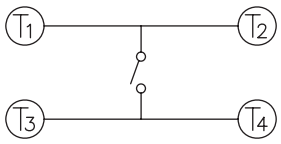
STSMW-6□6



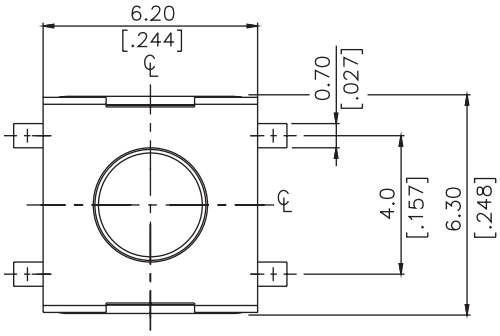
(SCALE 8:1)

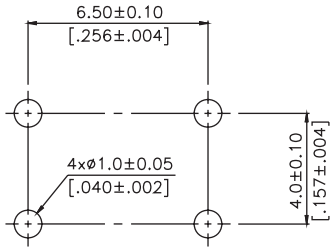
P.C.B. LAYOUT



CIRCUIT DIAGRAM

STSHW-6□4, 6□5, 6□7, 6□9





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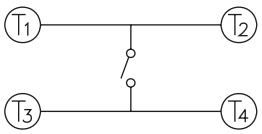

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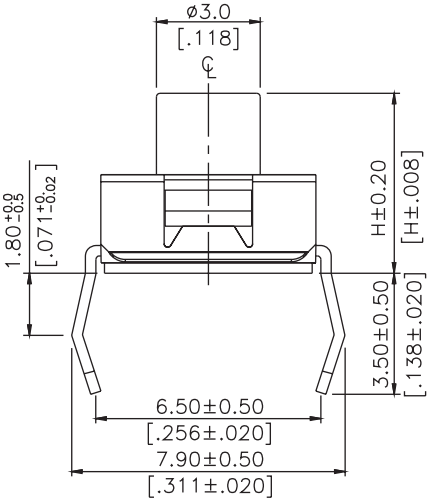

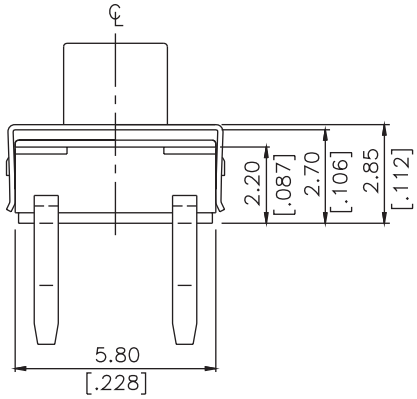

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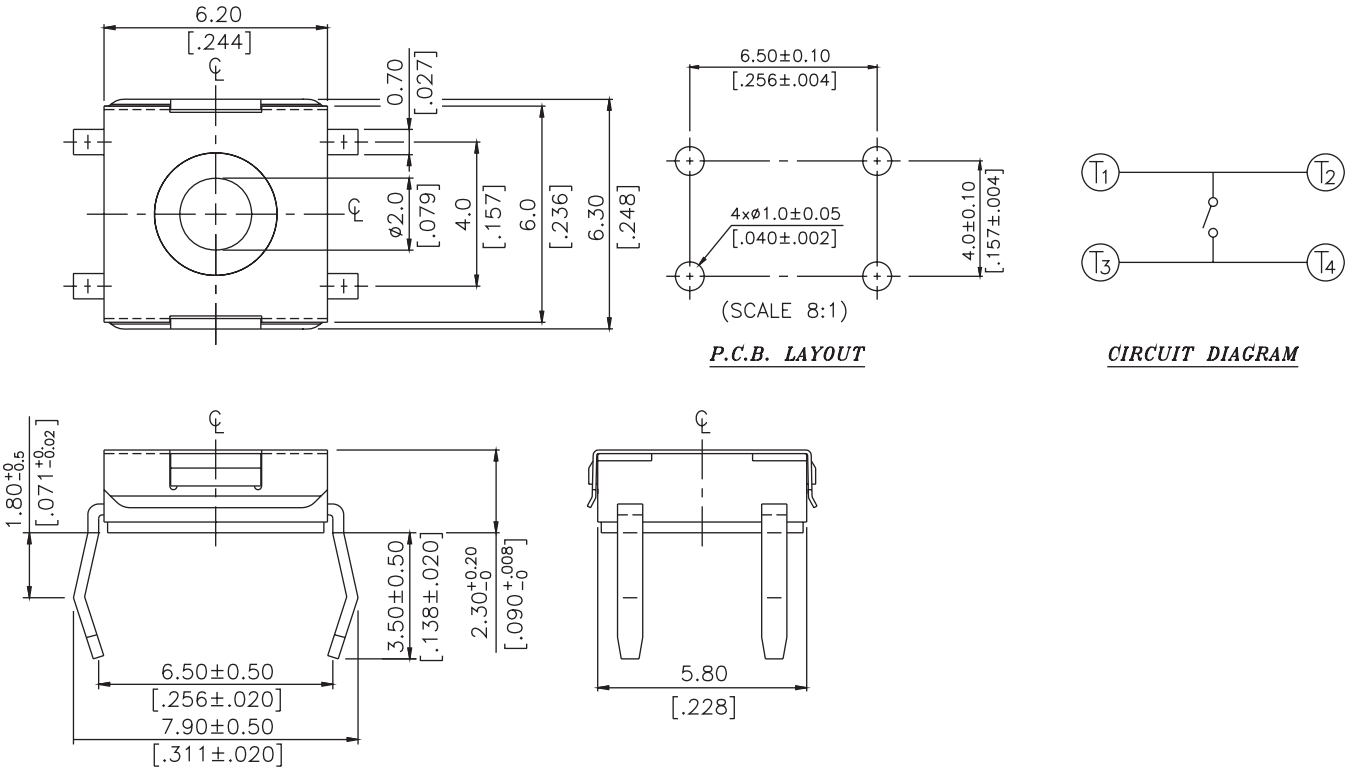
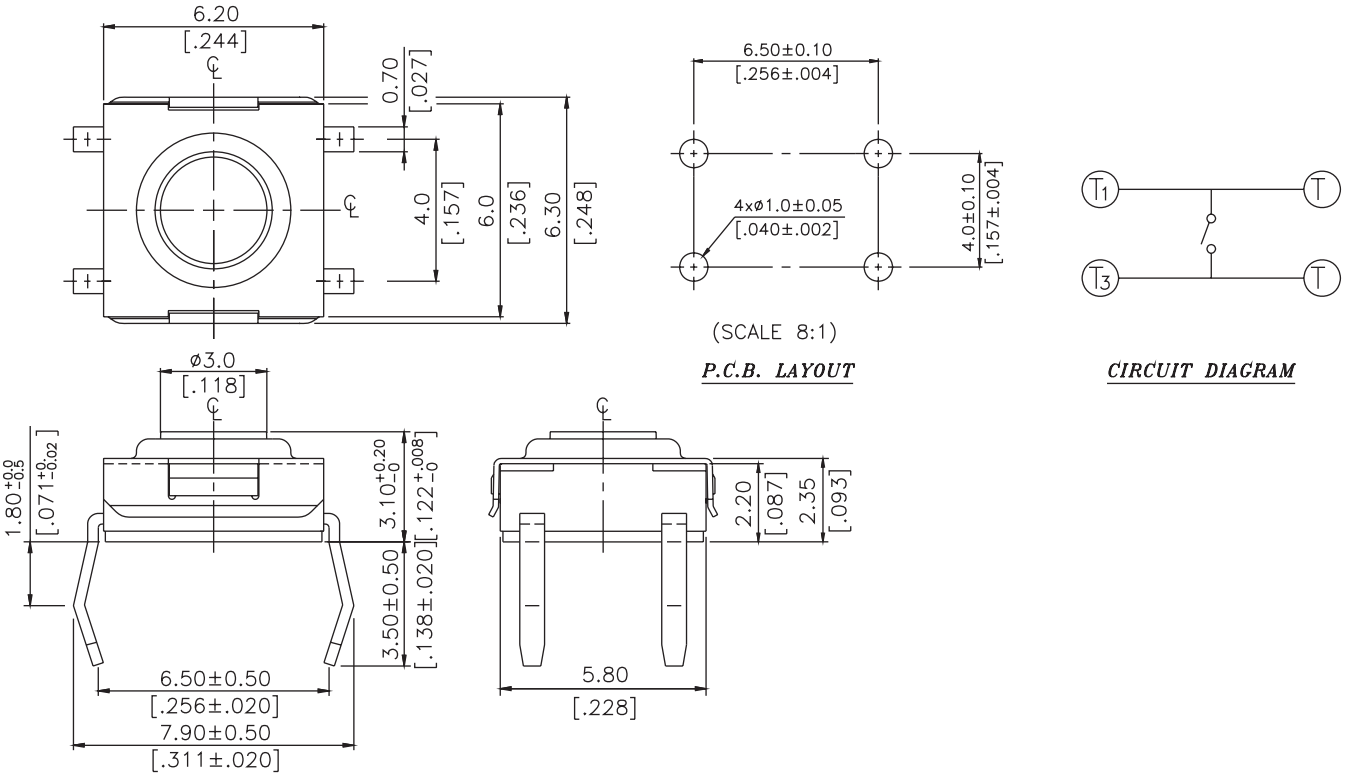
STSHW-6□8



STSHW-6□6



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HOW TO ORDER:

STS□W - 6 □ □ - □ □

H = Through Hole Terminals
M = Surface Mounting Terminals
GM = S.M.T & With Ground Terminal (For 6N6 Only)

Tact Switch Dimensions:
6 = 6.2mm

Color of Stem For Operating Force:
N = Brown, 160gf (6N6)
180gf (6N9,6N5,6N4,6N7)
R = Red, 260gf
S = Silver, 160gf (Silver Yellow)
T = Transperent, 360gf (6T9,6T5,6T7)

Package Style:
B = Tube
T/R = Tape & Reel

Soldering
R = Lead Free

Height(H) Dimensions:
6 = 3.1mm (N)
8 = 2.3mm (S)
9 = 3.8mm (N,R,T)
7 = 5.2mm (N,R,T)
5 = 3.5mm (N,R,T)
4 = 4.5mm (N,R)

Soldering Process

▲ Hand Soldering : Use a soldering iron of 30 watts, controlled at 350º approx. 5 seconds while applying solder
▲ Wave Soldering: Recommended solder temperature 500ºF (260ºC) max 5 seconds subject to P.C.B 1.6mm thickness (soldering for through hole type)
▲ Soldering: Vapor Phase & Reflow soldering can be applied