5x5mm SMT Halogen-Free Tactile Switches   TP89 Series

TP89SG...3...

PCB LAYOUT (with ground)   PCB LAYOUT (without ground)

CIRCUIT (with ground)   CIRCUIT (without ground)

TP89SG...2...

PCB LAYOUT (with ground)   PCB LAYOUT (without ground)

CIRCUIT (with ground)   CIRCUIT (without ground)

How to order:

TP89 [1] [2] [3] [4] [5] [6] [7]
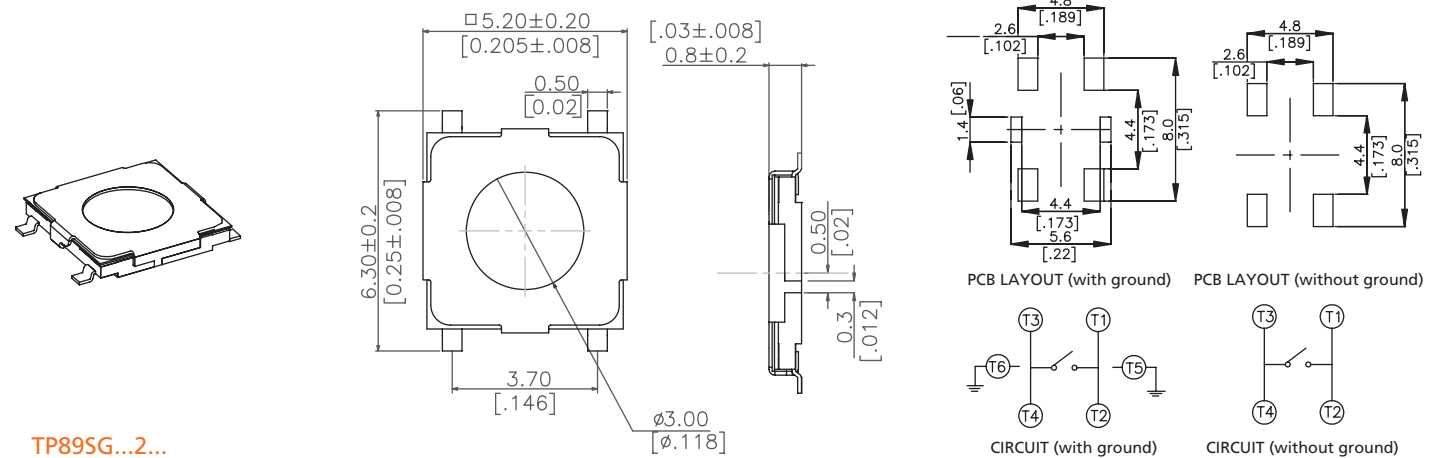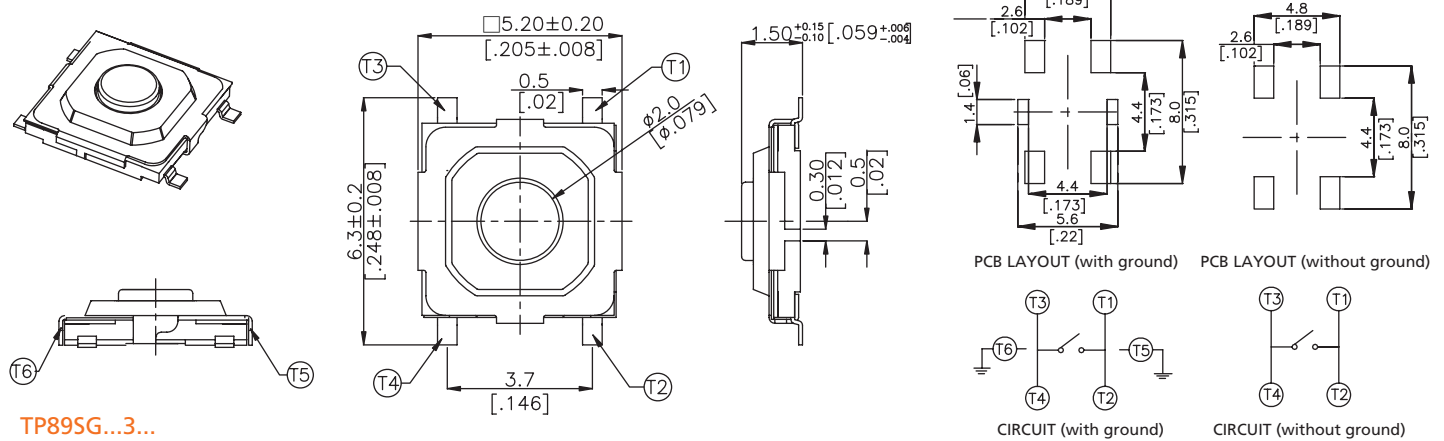
[1] TYPE OF TERMINALS:

S   Gull Wing SMT Terminals
J   J Bend SMT Terminals

[2] GROUND TERMINALS:

G   With Ground Terminals
C   With Ground Pin in Central

[3] MATERIAL OF COVER:

N   Nickel Silver (Standard)
S   Stainless Steel

[4] TOTAL HEIGHT:

2   0.8 mm
3   1.5 mm

[5] OPERATING FORCE:

L   100gf ± 50gf
S   160gf ± 50gf
H   260gf ± 50gf

[6] STEM:

N   Metal Stem
A   Black Stem (only for 160gf)
B   White Stem (only for 100gf & 260gf)

[7] PACKAGING:

TR   Tape and Reel (4000 pcs per reel)

General Tolerance: ±0.2mm

General Specifications:

MATERIALS

» Halogen-free materials
» Cover: Nickel Silver or stainless steel
» Contact Disc: Stainless steel with silver cladding
» Terminal: Brass with silver plated
» Base: LCP High-temp Thermoplastic black
» Plastic Stem: LCP High-temp Thermoplastic black
» Tape: Teflon

MECHANICAL

» Stroke: $0.25 \,^{+0.1mm}_{-0.2mm}$
» Stop Strength: Max.3kgf vertical static load continuously for 15 seconds
» Operation Temperature Range: -25°C to +70°C
» Storage Temperature Range: -30°C to +80°C

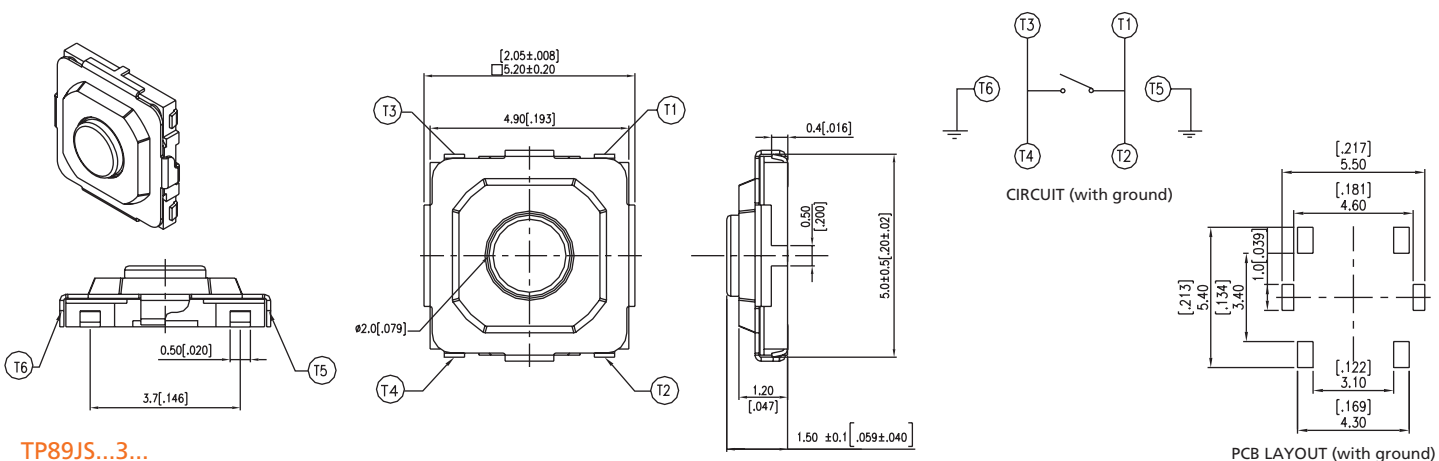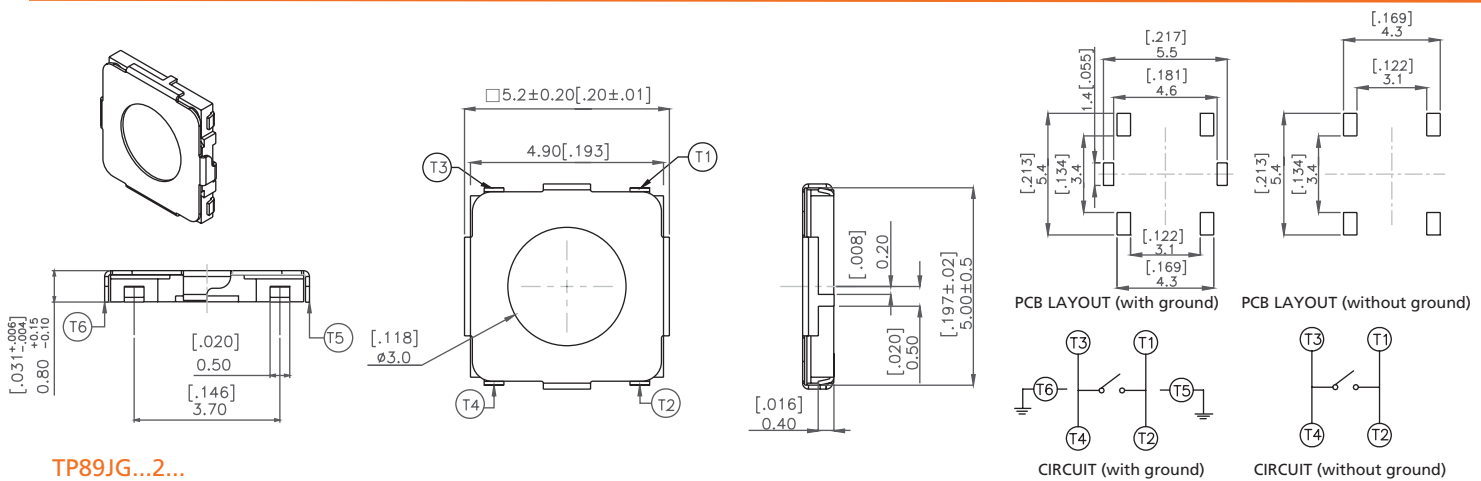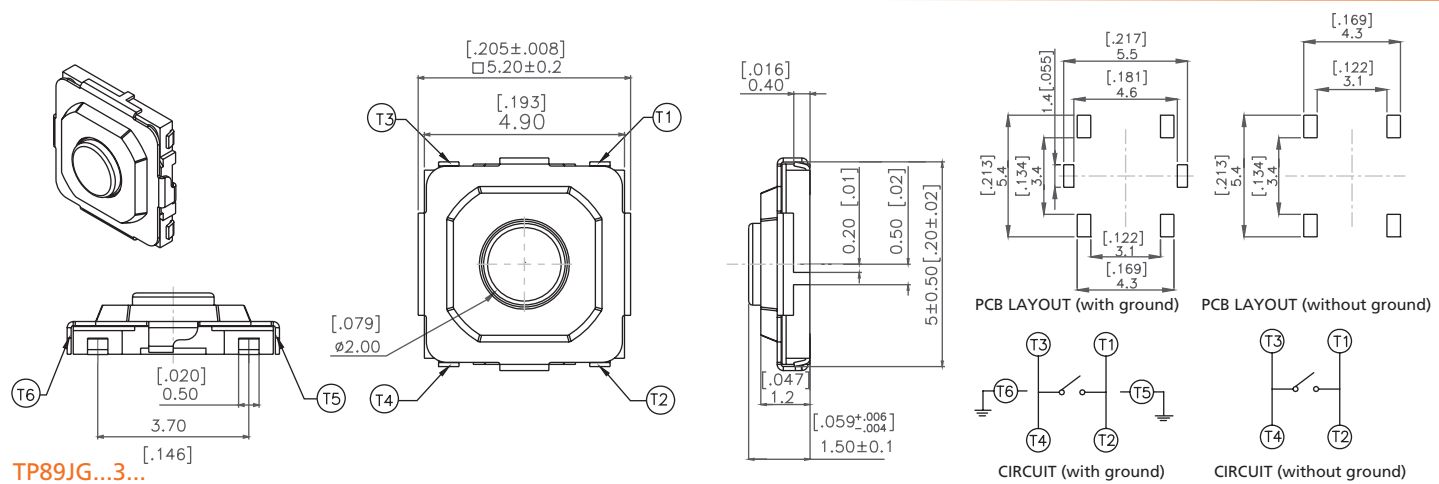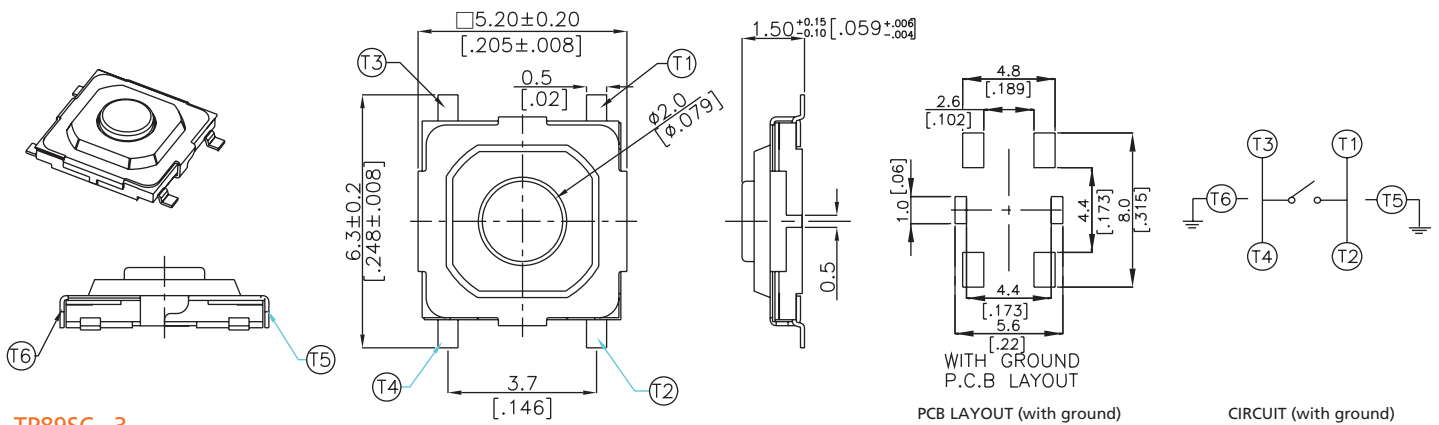**ELECTRICAL**

» Electrical Life: 1,000,000 cycles min. for 100gf &160gf
                   200,000 cycles min. for 260gf
» Rating: 50 mA, 12 VDC
» Contact Resistance: 100mΩ max.
» Insulation Resistance: 100mΩ min.at 500VDC
» Dielectric Strength: 250VAC/ 1 minute
» Contact Arrangement: 1 pole 1 throw

TP89SC...3...

PCB LAYOUT (with ground)

CIRCUIT (with ground)

WITH GROUND P.C.B LAYOUT

TP89JG...3...

PCB LAYOUT (with ground)

PCB LAYOUT (without ground)

CIRCUIT (with ground)

CIRCUIT (without ground)

TP89JG...2...

PCB LAYOUT (with ground)

PCB LAYOUT (without ground)

CIRCUIT (with ground)

CIRCUIT (without ground)

TP89JS...3...

CIRCUIT (with ground)
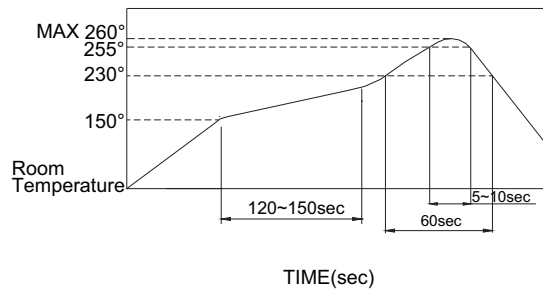
PCB LAYOUT (with ground)
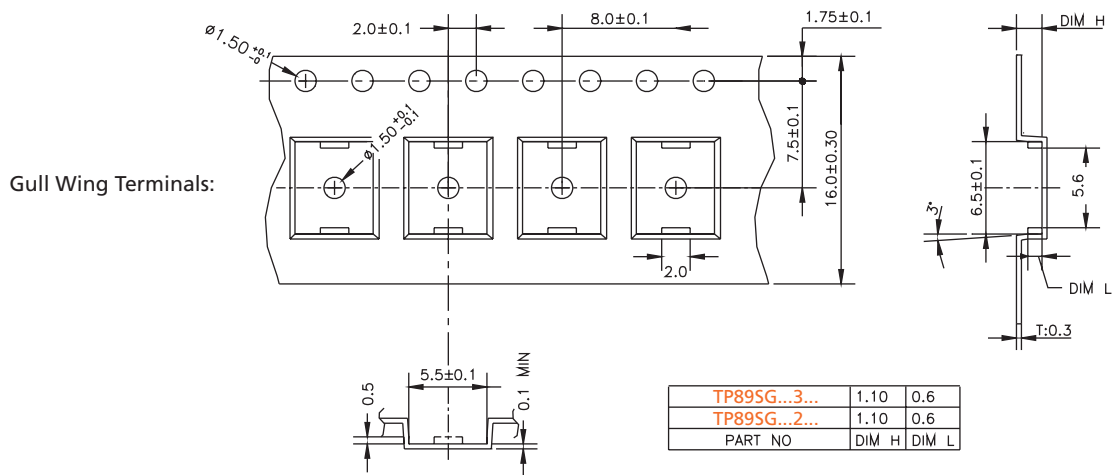
SOLDERING PROCESS

> Hand Soldering:
Use a soldering iron of 30 watts, controlled at 350°C approximately Max 5 seconds while applying solder.
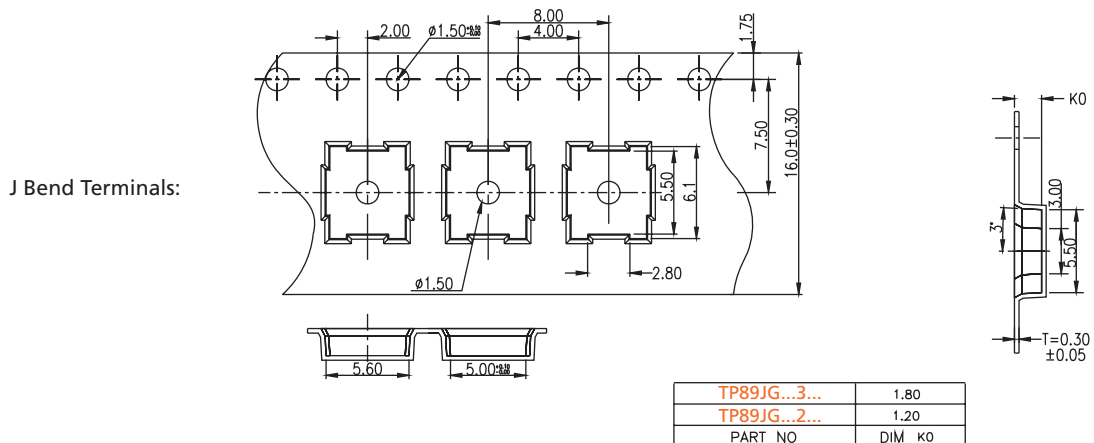
> Vapor phase & reflow soldering:

Temperature Profile:

MAX 260°
255°
230°
150°
Room
Temperature

120~150sec
60sec
5~10sec

TIME(sec)

Tape & Reel Packaging:

Gull Wing Terminals:

PART NO	DIM H	DIM L
TP89SG...3...	1.10	0.6
TP89SG...2...	1.10	0.6

General Tolerance：±0.1mm

J Bend Terminals:

PART NO	DIM K0
TP89JG...3...	1.80
TP89JG...2...	1.20

General Tolerance：±0.1mm