General Specifications

Electrical Capacity (Resistive Load)

Logic Level: 0.4VA maximum @ 28V AC/DC maximum

(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

Note: Find additional explanation of operating range in Supplement section.

Other Ratings

Contact Resistance: 80 milliohms maximum

Insulation Resistance: 500 megohms minimum @ 500V DC Dielectric Strength: 500V AC minimum for 1 minute minimum

Mechanical Life: 50,000 operations minimum **Electrical Life:** 50,000 operations minimum

Nominal Operating Force:

Pretravel: .024" (0.6mm); Overtravel: .019" (0.5mm); Total Travel: .043" (1.1mm)

Materials & Finishes

Polyphenylene sulfide (UL94V-0) **Actuator:**

Polyphenylene sulfide (UL94V-0) Case:

Nitrile butadiene rubber **Sealing Rings: Movable Contacts:** Phosphor bronze with gold plating

Phosphor bronze with gold plating **Stationary Contacts:** Base: Polyphenylene sulfide (UL94V-0)

Terminals: Phosphor bronze with gold plating

Environmental Data

Operating Temperature Range: -30°C through +85°C (-22°F through +185°F)

Humidity: 90 ~ 95% humidity for 96 hours @ 40°C (104°F)

Vibration: 10 ~ 500Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning

in 1 minute; 3 right angled directions for 2 hours

Shock: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

It is recommended that the body of models for upright mounting without bracket be fastened to a Mounting:

panel or similar support for protection of solder joints from mechanical stress.

Coplanarity: See specifications in Terms & Acronyms in Supplement section.

Processing

Soldering: Reflow Soldering Recommended. See Profile B in Supplement section.

Manual Soldering: See Profile B in Supplement section.

Automated cleaning. See Cleaning specifications in Supplement section. Cleaning:

Standards & Certifications

Flammability Standard: UL94V-0 actuator, case & base

> The G3B Series pushbuttons have not been tested for UL recognition or CSA certification. These switches are designed for use in a low-voltage, low-current, logic-level circuit. When used as intended in a logic-level circuit, the results do not produce hazardous energy.



Distinctive Characteristics

Ultra-miniature size allows high density mounting, and extremely light weight of 0.6 gram makes these switches ideal for handheld equipment.

Tape-reel and stick-tube packaging allow rapid automated placement of surface mount devices. Tape-reel packaging meets EIA-481-D Standard.

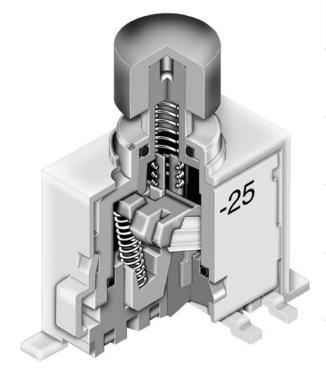
Heat resistant resin used for housing, base, and plunger allows vapor phase and infrared convection reflow soldering.

Combination of design features achieves total seal and allows automated processing techniques, including flux cleaning procedures: one-piece bushing and housing, rubber seals surrounding actuator and base, epoxy at joint of case and base, and molded-in, epoxy-sealed terminals.

Award-winning STC contact mechanism with benefits unavailable in conventional mechanisms: smoother, positive detent actuation, increased contact stability and unparalleled logic-level reliability. (Additional STC details in Terms & Acronyms; see Supplement section.)

Gull-wing terminals provide mechanical stability during soldering and simplified solder joint inspection.

Coplanarity: all considered surfaces must lie between two parallel planes that area maximum distance apart of .0059" (0.15mm). (Additional coplanarity details in Terms and Acronyms in the Supplement section.)



Actual Size

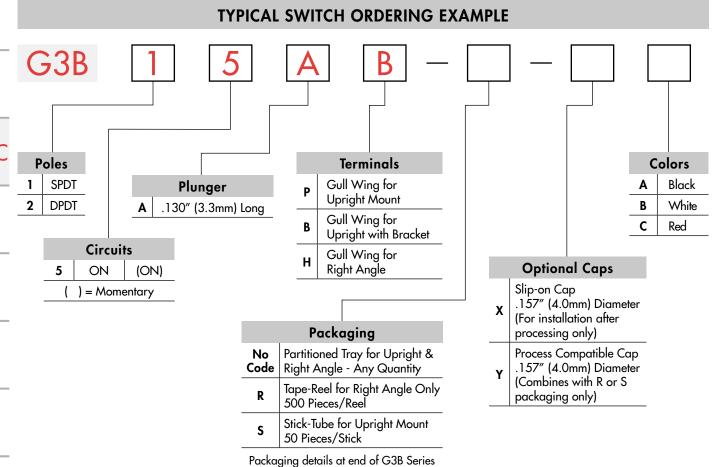




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C53

Touch



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

G3B15AB



		POLES & CIRCUITS						
	Plunger Position () = Momentary		Connected Terminals		Throw & Schematics			
			Normal	Down	Normal	Down		
-	Pole	Model	Slot	1	Slot	1	Note:	Terminal numbers are not actually on the switch.
	SP	G3B15	ON	(ON)	5-6	5-4	SPDT	• 5 (COM)
	DP	G3B25	ON	(ON)	5-6 2-3	5-4 2-1	DPDT	4 • 5 (COM) 2 • 4 • 3

PLUNGER & OPTIONAL CAPS



(0.6) Typ .024

.130" (3.3mm) Long Plunger



AT4063 Slip-on Cap .157" (4.0mm) Diameter

Available with bulk pack-

aging only. Cap must be

installed after processing.



Actual Size

Process Compatible Cap .157" (4.0mm) Diameter

Factory assembled. Available with tape-reel or stick-tube packaging only.

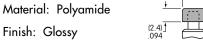
Caution: Pulling force specification for this cap is not warranted after reflow processing.

Material: Polyamide

Finish: Glossy



Finish: Glossy





Cap Colors Available:

(4.0) Dia .157

(2.0) Dia J

(1.5) .059



- (0.25) Typ .010

Black



(4.0) Dia .157

(3.8)

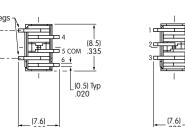
White



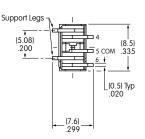
Red

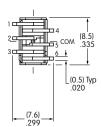
TYPICAL SWITCH DIMENSIONS

Single & Double Pole



Upright Mounting



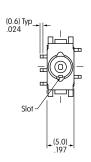


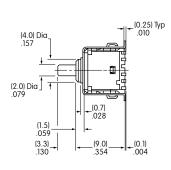


G3B25AP

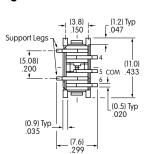
Single & Double Pole

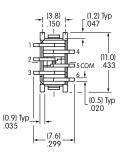
Upright Mounting with Bracket





(0.7) .028

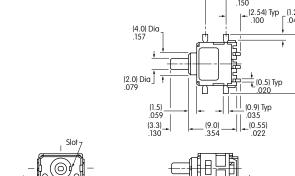


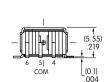




G3B15AB

(3.8) Typ .150 (2.54) Typ .100 **Right Angle Mounting** (1.25) Typ [.049





Single Pole







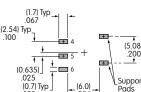
G3B15AH

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Touch

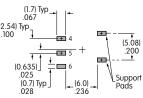
Pad Layouts for Surface Mount Terminals

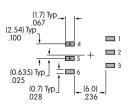
Single Pole Double Throw



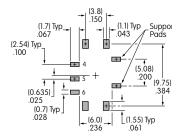
Double Pole Double Throw

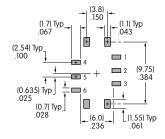
Upright Mounting



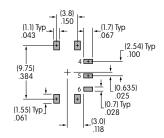


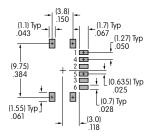
Upright Mounting with Bracket





Right Angle Mounting





PACKAGING



Partitioned Tray for Upright & Right Angle

Any quantity

If the G3 upright models are ordered in less than 50-piece increments or the right angle models in less than 500-piece increments, the switches are packaged in a partitioned tray. No code is required.





Tape-Reel for Right Angle

500 pieces per reel

Switches must be ordered in 500-piece increments when tape-reel packaging is selected.

This packaging meets EIA-481-D Standard for "16mm and 24mm Embossed Carrier Taping of Surface Mount Components for Automatic Handling."



Stick-Tube for Upright Mount

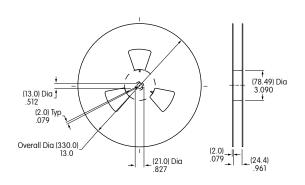
50 pieces per stick

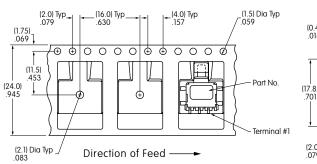
Switches must be ordered in 50-piece increments when stick-tube packaging is selected.

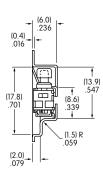


Tape-Reel Packaging for Right Angle Mount

Each tape-reel of 550 pockets contains 500 switches. Minimum Leader Length: 7.87" (200mm) Minimum Trailer Length: 1.97" (50mm)







Reel Dimensions

Tape Dimensions

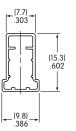
Stick-Tube Packaging for Upright Mount

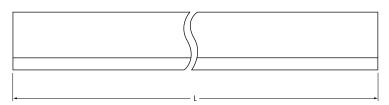
Each stick-tube contains 50 switches.

L = Length

G3B Upright (code P) 18.31" (465mm)

G3B Upright with Bracket (code B) 21.26" (540mm)





Stick-Tube Dimensions

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Rockers

Toggles

Programmable Illuminated PB Pushbuttons

Keylocks

Rotaries

Slides

Ė

Touch

Indicators

Supplement | Accessories