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## General Specifications

#### **Electrical Capacity (Resistive Load)**

Low/Logic Level: 50mA @ 24V DC maximum

#### Other Ratings

**Contact Resistance:** 100 milliohms maximum

**Insulation Resistance:** 100 megohms minimum @ 250V DC

250V AC minimum between contacts & between contacts & case for 1 minute minimum Dielectric Strength:

**Mechanical Life:** 100,000 operations minimum Electrical Life: 100,000 operations minimum

**Nominal Operating Force:** 1.57N

> **Total Travel:** .010" (.250mm)

#### **Materials & Finishes**

**Actuator:** Glass fiber reinforced polyamide (UL94V-0)

Stainless steel Case:

Polytetrafluoroethylene Seal: Base: Polyphthalamide (UL94V-0)

**Movable Contacts:** Beryllium copper with silver plating

**Stationary Contacts:** Brass with silver plating Brass with silver plating **Terminals:** 

#### **Environmental Data**

-25°C through +70°C (-13°F through +158°F) **Operating Temperature Range:** 

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

Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning

in 1 minute; 3 right angled directions for 2 hours

50G (490m/s<sup>2</sup>) acceleration (tested in 6 right angled directions, with 5 shocks in each direction) Shock:

#### **PCB Processing**

**Soldering:** Wave Soldering Recommended. See Profile A in Supplement section.

Manual Soldering: See Profile A in Supplement section.

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

#### **Standards & Certifications**

Flammability Standards: UL94V-0 actuator & base

> The CB Series tactiles 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

Sealed construction prevents contact contamination and allows automated soldering and cleaning.

.244" (6.2mm) square body allows compact mounting.

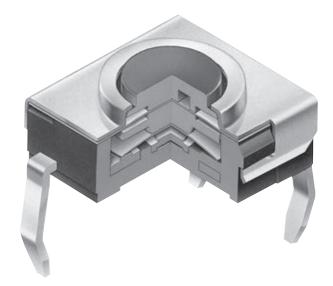
Actuator and base meet UL flammability rating of 94V-0.

Dome contact gives crisp tactile feedback to positively indicate circuit transfer and assures high reliability and long life more than 100,000 operations.

Crimped terminals ensure secure mounting and prevent dislodging during wave soldering.

Insert molded terminals lock out flux, solvents, and other contaminants.

Packaged in stick tube or partitioned tray.



Actual Size



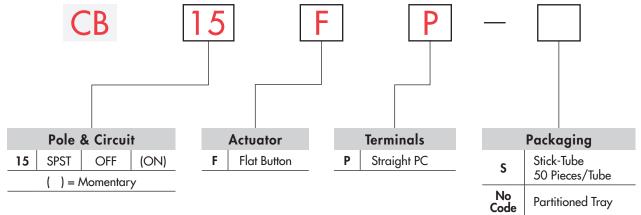


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# Toggles

#### TYPICAL SWITCH ORDERING EXAMPLE



#### **DESCRIPTION FOR TYPICAL ORDERING EXAMPLE**

CB15FP

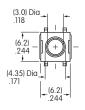


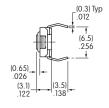
POLE & CIRCUIT										
		Actuator Position ( ) = Momentary		Switch T	hrow & Schematic					
		Normal	Down							
Pole	Model	_		- SPST	13	Note: Terminal numbers are not				
SP	CB15	OFF	(ON)		2 4	actually on the switch.				

#### **TYPICAL SWITCH DIMENSIONS**

#### Single Pole • Single Throw











CB15FP



#### **PACKAGING**



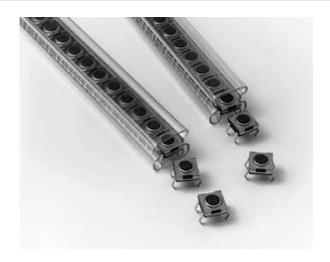
#### Stick-Tube

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



#### **Partitioned Tray**

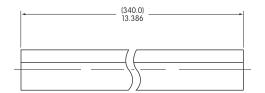
If ordered in less than 50-piece increments, the switches are packaged in a partitioned tray.



#### **Stick-Tube Dimensions**

Each stick-tube contains 50 switches

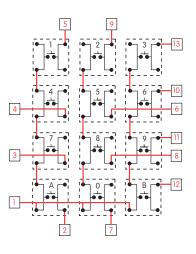




#### **KEYBOARD MATRIX**

#### **Common Bus Matrix**

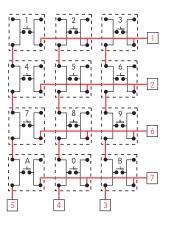
These single pole, single throw switches can be used in a keyboard matrix and, using strapped terminals, achieve a common bus electrical configuration on a single-sided PC board.



PC Terminations														
		1	2	3	4	5	6	7	8	9	10	11	12	13
	1	0												
	2	0								$\bigcirc$				
S	3	0												0
he	4	0												
Ç	5	0					0							
<u>-</u>	6	0									0			
(Switches	7	0		0										
Keys (	8	0												
	9	0												
	0	0												
	Α	0												
	В	0												
O = ON														
						0	=	= (	NO	<u> </u>				

#### X-Y Matrix

These single pole, single throw switches can be arranged on a single-sided PC board matrix with strapped terminals to achieve an X-Y type electrical interconnection.



<u> </u>	PC	1	2	3	10 4	5	ns 6	7
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S	3							
Switches	4							
Ç	5							
 \	6							
S	7							
s (	8							
Keys	9						0	
Ke	0							
	Α							
	В							Ō
		(	$\mathbb{D}^{-}$	=	C	N		

Red = PCB Trace Black = Switch Circuit

### **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

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