

GT Series e Switches

Features/Benefits

- ***Sealed against solder and cleaning process contaminants***
- ***Ultraminiature size, smallest footprint available***
- ***Thru-hole and surface mount models***
- ***High temperature materials (UL 94V-0)***
- ***RoHS compliant and compatible***

Typical Applications

- **Hand-held telecommunications**
- **Small instrumentation**



Specifications

CONTACT RATING: 0.4 VA max. @ 20 V AC or DC max.
MECHANICAL & ELECTRICAL LIFE: 40,000 make-and-break cycles at full load.
CONTACT RESISTANCE: Below 50 m Ω typ. initial @ 2-4 V DC, 100 mA.
INSULATION RESISTANCE: $10^9 \Omega$ min.
DIELECTRIC STRENGTH: 500 Vrms min. @ sea level.
OPERATING TEMPERATURE: -30°C to 85°C.
SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).
PACKAGING: Surface mount switches shipped in anti-static tape and reel packaging per EIA 481-3, see page F-47 for drawings and reel information. Tape and cover strip are conductive for use near statically sensitive components, consult Customer Service Center.

Materials

HOUSING AND BASE: Glass filled nylon 4/6, flame retardant, heat stabilized (UL 94V-0).

ACTUATOR: Glass filled nylon 4/6, flame retardant, heat stabilized (UL 94V-0), with standard internal o-ring seal.

SWITCH SUPPORT: Brass, tin plated.

MOVABLE CONTACTS: Copper alloy, with gold plate over nickel plate.

STATIONARY CONTACTS: Copper alloy, with gold plate over nickel plate.

TERMINALS: Gold.

TERMINAL SEAL: Epoxy. All terminals insert molded.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

How To Order

Complete part numbers for GT Series Sealed Ultraminiature Toggle Switches are shown on pages F-43 thru F-47.



GT11MCBE
SPDT

PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
			
GT11MCBE GT13MCBE	ON ON	NONE OFF	ON ON
Conn. Terms.	2-3	OPEN	2-1

Schematic



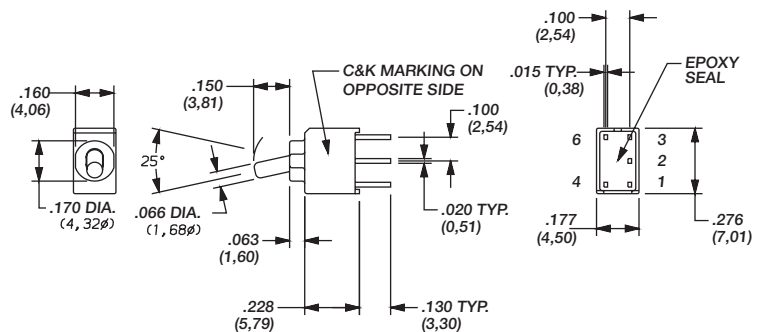
SPDT Note: Pins 4 and 6 not connected

GT12MCBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1

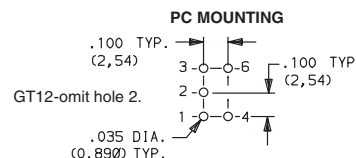
Schematic



SPST Note: Pins 4 and 6 not connected



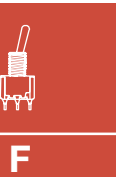
ACTUATOR SHOWN IN POS. 1



TERMINAL NOS. FOR
REFERENCE ONLY



GT12 MODEL
TERMINALS 1,3,4 & 6 ONLY



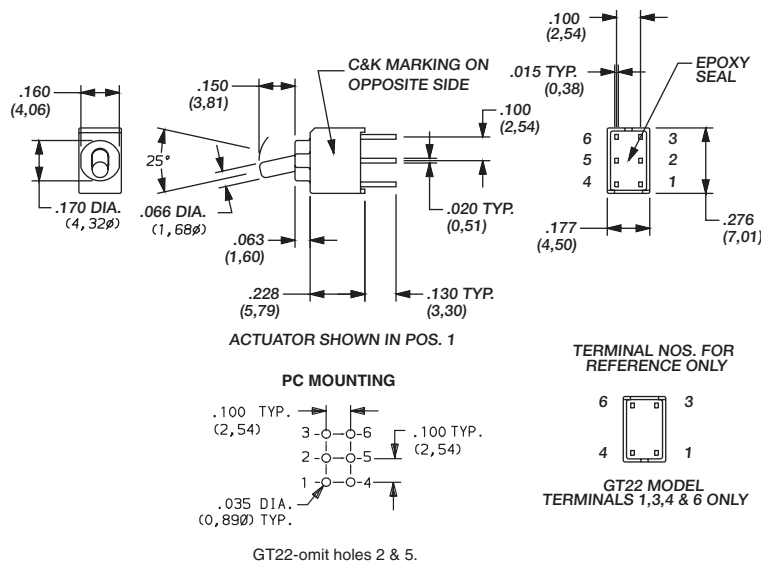
Toggle



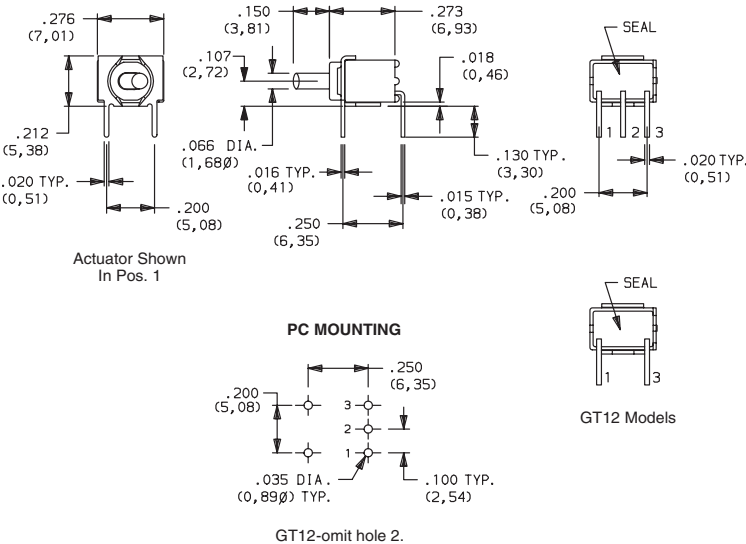
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

GT Series

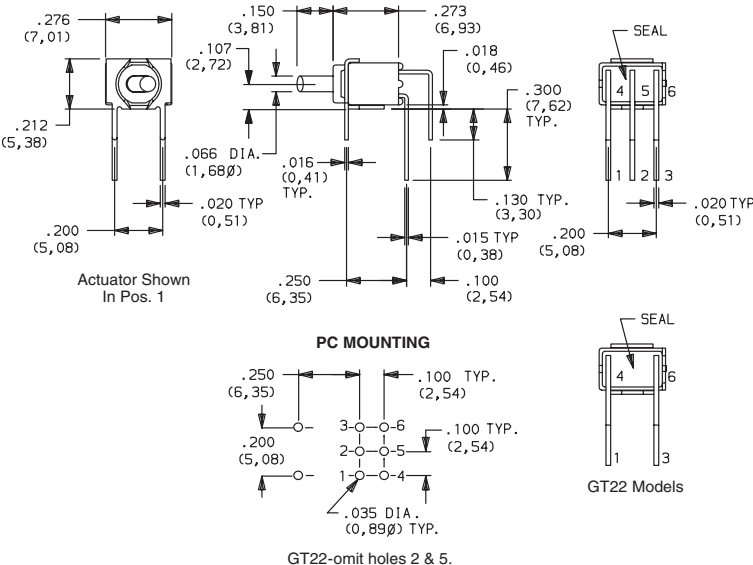
Sealed Ultraminiature Toggle Switches



PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT21MCBE GT23MCBE	ON	NONE	ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic			
DPDT			
GT22MCBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
DPST			



PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT11MABE GT13MABE	ON	NONE	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic			
SPDT			
GT12MABE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
SPST			



PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT21MABE GT23MABE	ON	NONE	ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic			
DPDT			
GT22MABE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic			
DPST			



Toggle
F



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

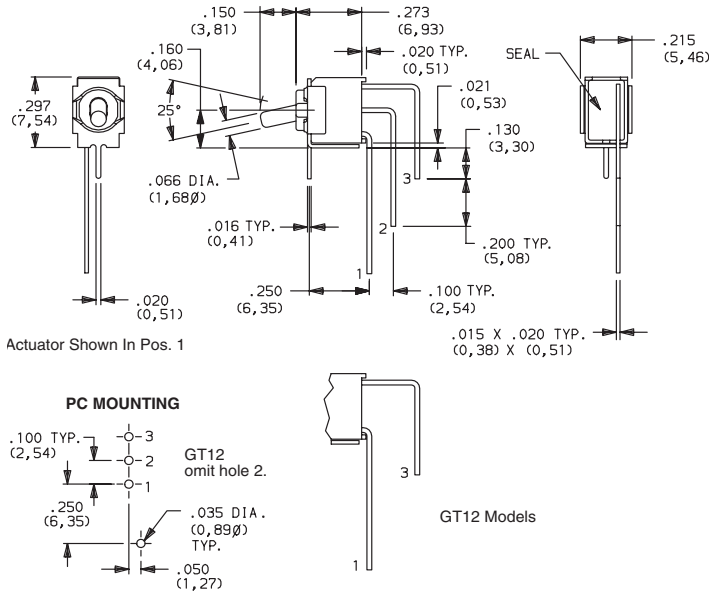
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GT Series Sealed Ultraminiature Toggle Switches



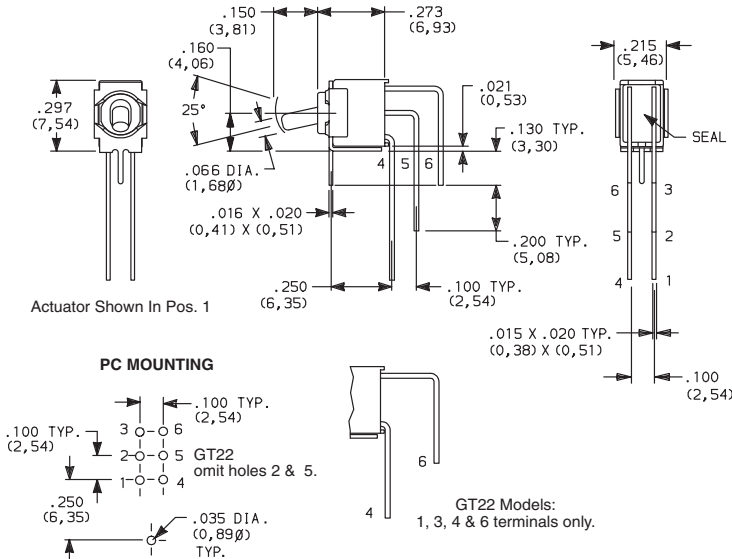
GT11MAVBE
Vertical
Actuation
SPDT

PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
GT11MAVBE	ON	NONE	ON
GT13MAVBE	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic			
SPDT			
GT12MAVBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
SPST			



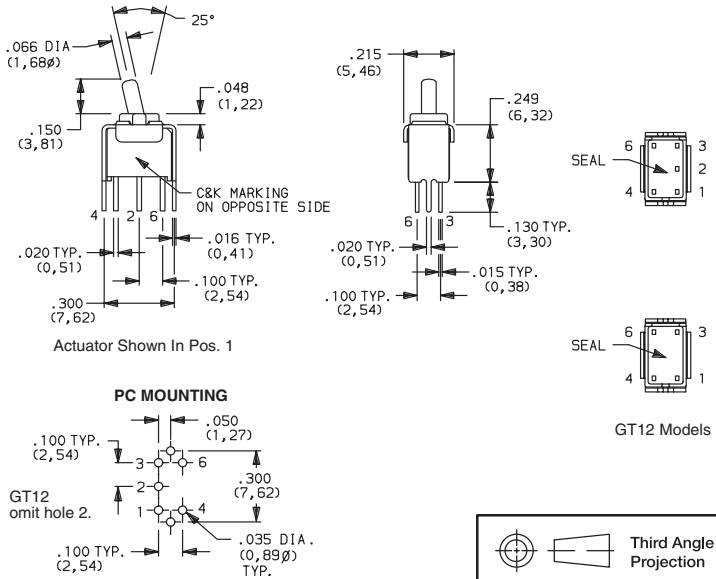
GT21MAVBE
Vertical
Actuation
DPDT

PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
GT21MAVBE	ON	NONE	ON
GT23MAVBE	ON	OFF	ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic			
DPDT			
GT22MAVBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic			
DPST			



GT11MV3BE
SPDT

PART NUMBER	SWITCH FUNCTION		
	POS. 1	POS. 2	POS. 3
GT11MV3BE	ON	NONE	ON
GT13MV3BE	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic			
SPDT	Note: Pins 4 and 6 not connected		
GT12MV3BE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
SPST	Note: Pins 4 and 6 not connected		

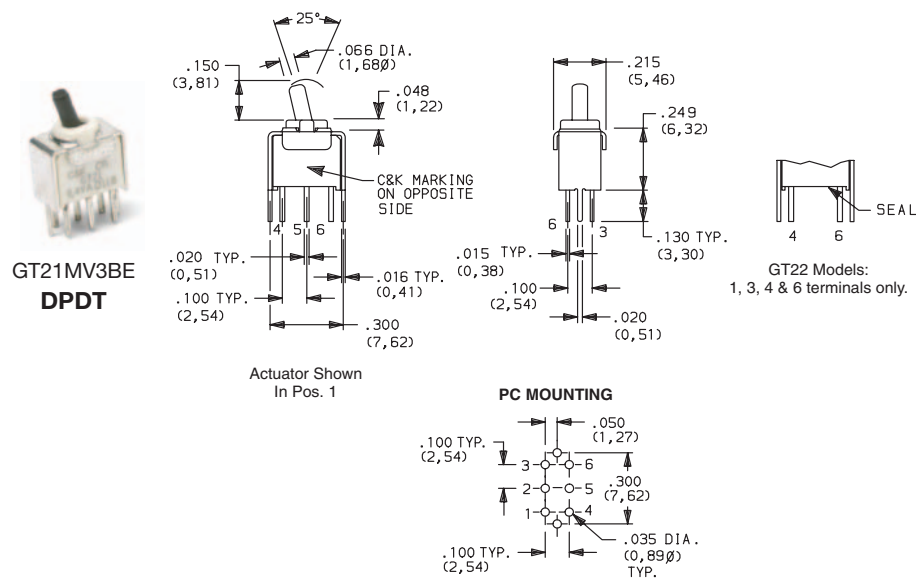


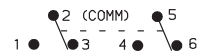
Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

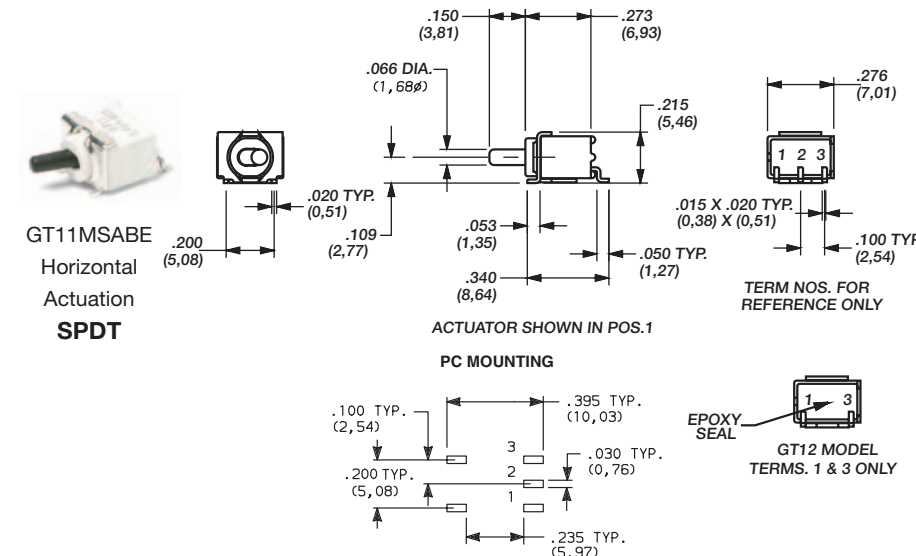


GT Series

Sealed Ultraminiature Toggle Switches

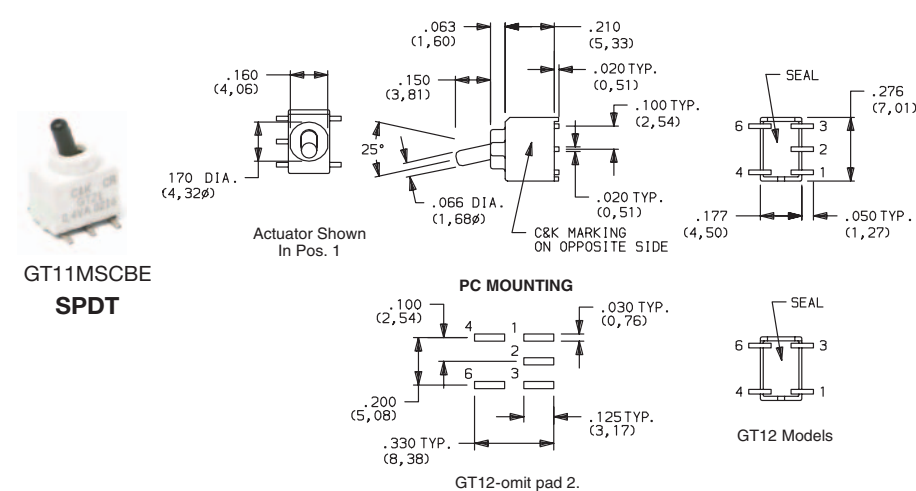


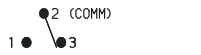
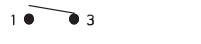
PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT21MV3BE	ON	NONE	ON
GT23MV3BE	ON	OFF	ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic			
DPDT			
GT22MV3BE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic			
DPST			



PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT11MSABETR	ON	NONE	ON
GT13MSABETR	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic			
SPDT			
GT12MSABETR	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
SPST			

Standard with tape & reel packaging, see page F-47. GT12-omit pad 2.



PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT11MSCBETR	ON	NONE	ON
GT13MSCBETR	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic			
SPDT	Note: Pins 4 and 6 not connected		
GT12MSCBETR	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
SPST	Note: Pins 4 and 6 not connected		

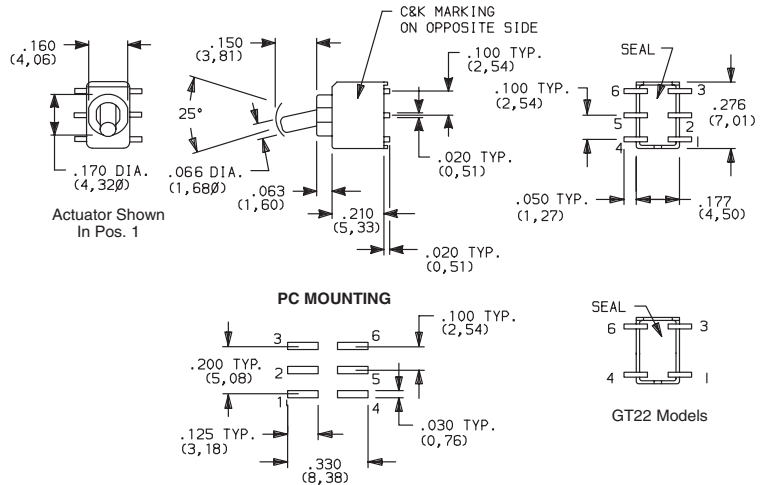
Standard with tape & reel packaging, see page F-47.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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PART NUMBER	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
GT21MSCBETR GT23MSCBETR	ON ON	NONE OFF	ON ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic 			
DPDPT			
GT22MSCBETR	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic 			
DPST			



TAPE & REEL

Technical drawing of a 3-pin connector assembly. The drawing shows three individual pins, each labeled "C&K", mounted on a common base. The base has a wavy, irregular shape on the left side. The drawing includes the following dimensions and tolerances:

- Pin Spacing:**
 - Distance between the center of the first and second pins: $.079$ (2,00)
 - Distance between the center of the second and third pins: $.472$ (12,00)
- Pin Diameter:**
 - Pin diameter: $.061$ DIA. (1,55#)
- Pin Height:**
 - Distance from the top of the pin to the top of the base: $.157$ (4,00)
- Base Dimensions:**
 - Overall width of the base: $.604$ (15,34)
 - Distance from the center of the first pin to the right edge of the base: $.286$ (7,26)
 - Distance from the center of the third pin to the right edge of the base: $.945$ (24,00)
 - Distance from the top of the pin to the top of the base: $.453$ (11,51)
 - Distance from the top of the pin to the bottom of the base: $.069$ (1,75)
- Feed Direction:** Indicated by an arrow pointing to the right, labeled "FEED DIRECTION".

REEL INFORMATION	
OUTSIDE DIAMETER	13.00 (330,0)
PILOT HOLE	.512 (13,0)
QUANTITY PER REEL	600

Technical drawing of a 3D-printed part, showing top, front, and side views with dimensions and tolerances.

Top View Dimensions:

- Overall width: $.787 \pm .0020$
- Distance from left edge to center of first hole: $.157 \pm .0004$
- Distance between centers of first two holes: $.079 \pm .0002$
- Distance from center of last hole to right edge: $.300 \pm .0007$

Front View Dimensions:

- Overall height: $.945 \pm .0024$
- Distance from top surface to center of hole: $.440 \pm .0011$
- Distance from top surface to bottom of hole: $.069 \pm .0018$

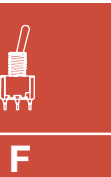
Side View Dimensions:

- Overall depth: $.059 \text{ DIA. } (\pm .0050)$

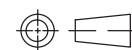
Other Features:

- 12 holes in total, arranged in two rows of 6.
- Top surface is flat.
- Bottom surface is flat.
- Part is symmetrical about a vertical centerline.

REEL INFORMATION	
OUTSIDE DIAMETER	13.00 (330,0)
PILOT HOLE	.512 (13,0)
QUANTITY PER REEL	200



Toggle



Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change