### Sealed Ultraminiature Toggle 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  $\Omega$  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-42 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.

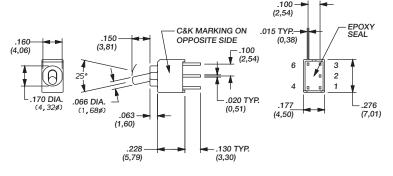
#### **How To Order**

Complete part numbers for GT Series Sealed Ultraminiature Toggle Switches are shown on pages F-38 thru F-42.

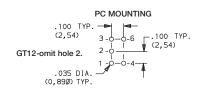


GT11MCBE SPDT

	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
PART NUMBER	7	1	1
GT11MCBE	ON	NONE	ON
GT13MCBE	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic	<b>●</b> 2 (COMM)		
	1 • • 3		
SPDT	Note: Pins 4 and 6 not connected		
GT12MCBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
	1	• 3	
SPST	Note: Pins 4 and 6 not connected		



ACTUATOR SHOWN IN POS. 1

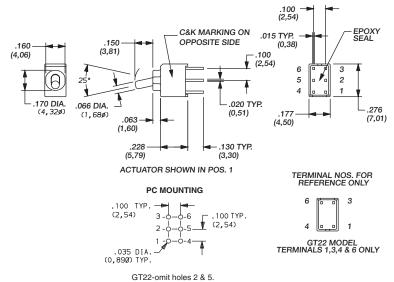








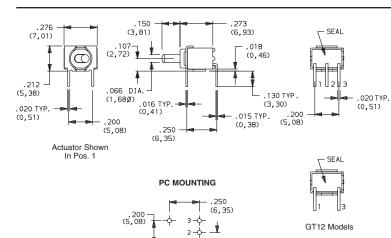
# GT Series Sealed Ultraminiature Toggle Switches



	CM	TCH FUNC	TION	
	POS.1	POS. 2	POS. 3	
PART NUMBER	7	1	1	
GT21MCBE	ON	NONE	ON	
GT23MCBE	ON	OFF	ON	
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4	
Schematic 2 (COMM) 5 5 1 0 6 6				
DPDT	1 • \•3	4 • \•	6	
GT22MCBE	OFF	NONE	ON	
Conn. Terms.	OPEN	N/A	3-1	
Schematic	з 🤊	9 6		
DPST	1 • /	•/4		



GT21MCBE **DPDT** 



.035 DIA

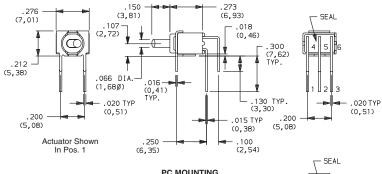
GT12-omit hole 2.

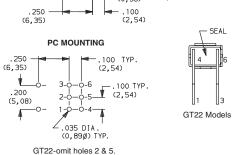
(0,89Ø) TYP.

	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
PART NUMBER	7	1	1
GT11MABE	ON	NONE	ON
GT13MABE	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic Q2 (COMM)			
SPDT	1 •	• • 3	
GT12MABE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
	1	3	
SPST			



GT11MABE Horizontal Actuation SPDT





.100 TYP.

	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
PART NUMBER	7	1	1
GT21MABE GT23MABE	ON ON	NONE OFF	ON ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic DPDT	1 •	2 (COMM) (	5
GT22MABE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic DPST	1	3 /	6 -/4



GT21MABE Horizontal Actuation **DPDT** 



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



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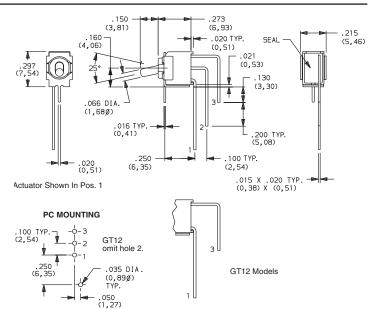


## **Sealed Ultraminiature Toggle Switches**



GT11MAVBE Vertical Actuation SPDT

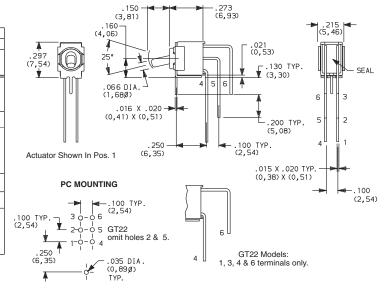
	SWI	TCH FUNC	ΓΙΟΝ
	POS.1	POS. 2	POS. 3
PART NUMBER	7	1	4
GT11MAVBE	ON	NONE	ON
GT13MAVBE	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic	<b>Q</b> 2	(COMM)	
SPDT	1 • \•	3	
GT12MAVBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
	1 •	3	
SPST			





GT21MAVBE Vertical Actuation **DPDT** 

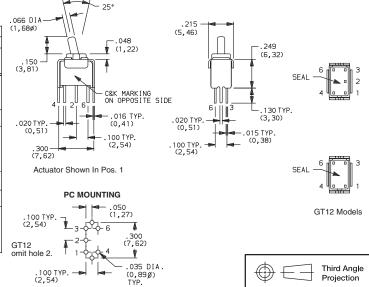
	SWI	TCH FUNC	TION
	POS.1	POS. 2	POS. 3
PART NUMBER	7	1	1
GT21MAVBE	ON	NONE	ON
GT23MAVBE	ON	OFF	ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic •2 (COMM) •5			
	1 • \_3	OMM) 5	. 6
DPDT	10 (03	70 (0	, 0
GT22MAVBE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic	3	9 9	6
	1.0	//	4
DPST		• /	4





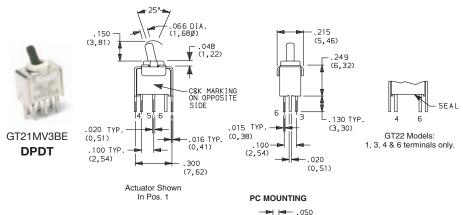
GT11MV3BE SPDT

	SWITCH FUNCTION		
	POS.1	POS. 2	POS. 3
PART NUMBER	7	1	1
GT11MV3BE	ON	NONE	ON
GT13MV3BE	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic	€2 (COMM)		
	1 •	\●3	
SPDT	Note: Pins	4 and 6 not	connected
GT12MV3BE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
	1 •	9	
SPST	Note: Pins 4 and 6 not connected		

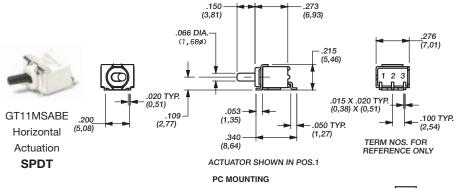




## **GT Series Sealed Ultraminiature Toggle Switches**

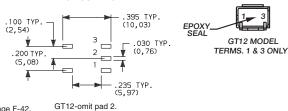


	SWIT	CH FUNC	TION
	POS.1	POS. 2	POS. 3
PART NUMBER	7	1	1
GT21MV3BE GT23MV3BE	ON ON	NONE OFF	ON ON
Conn. Terms.	2-3, 5-6	OPEN	2-1, 5-4
Schematic	2 (	COMM)	5
DPDT	10 03	4	
GT22MV3BE	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1, 6-4
Schematic	3	9	6
DPST	1 • /	//	4



		POS.1	POS. 2	POS. 3
	PART NUMBER	7	1	1
	GT11MSABETR GT13MSABETR	ON ON	NONE OFF	ON ON
?	Conn. Terms.	2-3	OPEN	2-1
	Schematic SPDT	1 • 2 (0	COMM)	
	GT12MSABETR	OFF	NONE	ON
	Conn. Terms.	OPEN	N/A	3-1
	Schematic	1	3	
	SPST			

SWITCH FUNCTION



.035 DIA. (0,89ø) TYP.

GT12 MODEL

Standard with tape & reel packaging, see page F-42.

Standard with tape & reel packaging, see page F-42.

Cold Cold	
GT11MSCBE	PC MOUNTING
SPDT	(2,54) 4 1 030 TYP. SEAL
	6 3
	.200 - 4 - 1
	(5, 08) .125TYP. .330 TYP. (3, 17) GT12 Models
	GT12-omit pad 2.

	SWIT	CH FUNC	TION
	POS.1	POS. 2	POS. 3
PART NUMBER	7	1	1
GT11MSCBETR	ON	NONE	ON
GT13MSCBETR	ON	OFF	ON
Conn. Terms.	2-3	OPEN	2-1
Schematic Q2 (COMM)			
1	• <b>√</b> •3		
SPDT No	SPDT Note: Pins 4 and 6 not connected		
GT12MSCBETR	OFF	NONE	ON
Conn. Terms.	OPEN	N/A	3-1
Schematic			
	1 • 3	3	
SPST No	te: Pins 4 a	and 6 not o	connected



Third Angle Projection

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

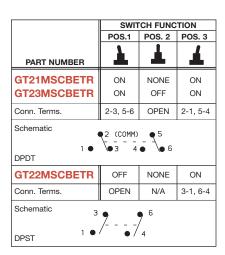


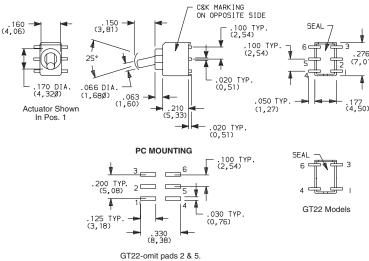
## **GT Series**

# **Sealed Ultraminiature Toggle Switches**



GT21MSCBE

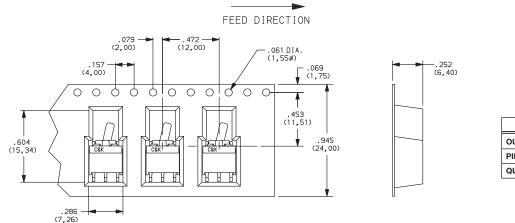




Standard with tape & reel packaging

### **TAPE & REEL**

For part numbers GT11MSABE, GT12MSABE, GT13MSABE



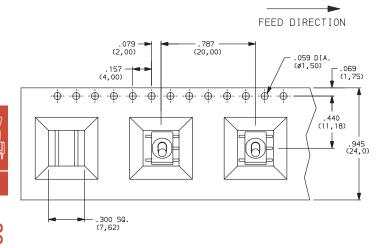
 REEL INFORMATION

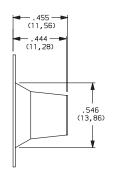
 OUTSIDE DIAMETER
 13.00 (330,0)

 PILOT HOLE
 .512 (13,0)

 QUANTITY PER REEL
 600

For part numbers GT11MSCBE, GT12MSCBE, GT13MSCBE, GT21MSCBE, GT22MSCBE, GT23MSCBE,





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



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

