



\*Process sealed—withstands soldering and cleaning processes.



GP11MSAKE

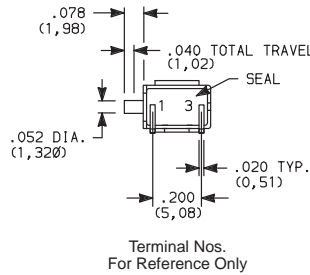
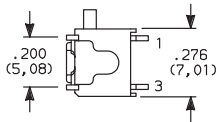
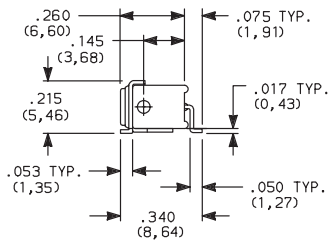


GP12MSC1KE

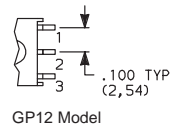


GP11MSV1KE

- Process compatible—withstands IR and vapor phase reflow soldering and cleaning processes—high temperature materials (UL 94V-0)
- Tin-lead alloy coats all sides of terminals for joint integrity
- Sealed construction—internal actuator o-ring—epoxy base seal
- Five surface mount terminal styles—.050" and .100" terminal spacing
- SPST and SPDT momentary models available
- Tape and reel packaging available for automated placement



Terminal Nos. For Reference Only



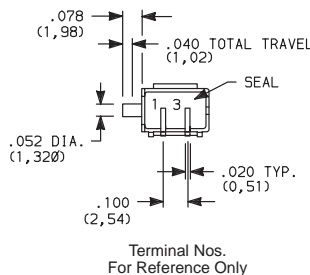
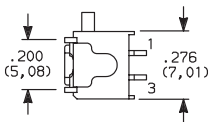
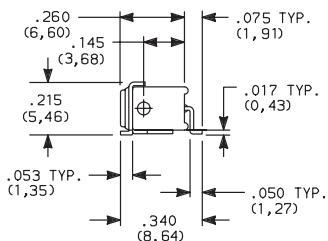
GP12 Model

PART NO.	SWITCH FUNCTION	
	POS. 1	POS. 2
<b>GP11MSAKE</b>	OFF	MOM.
Conn. Terms.	OPEN	1-3
Schematic		
 SPST		
<b>GP12MSAKE</b>	ON	MOM.
Conn. Terms.	2-1	2-3
Schematic		
 SPDT		

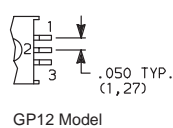
MOM. = Momentary

### SA Surface Mount Terminals SPST and SPDT Models

Part No. Shown: GP11MSAKE



Terminal Nos. For Reference Only



GP12 Model

PART NO.	SWITCH FUNCTION	
	POS. 1	POS. 2
<b>GP11MSA1KE</b>	OFF	MOM.
Conn. Terms.	OPEN	1-3
Schematic		
 SPST		
<b>GP12MSA1KE</b>	ON	MOM.
Conn. Terms.	2-1	2-3
Schematic		
 SPDT		

MOM. = Momentary

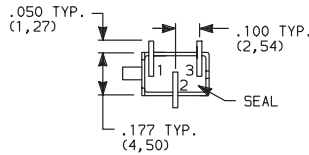
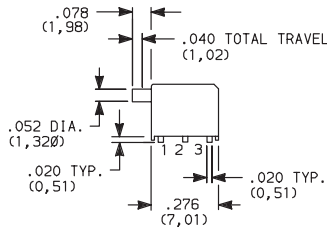
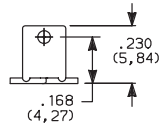
### SA1 Half-Pitch Surface Mount Terminals SPST and SPDT Models

Part No. Shown: GP11MSA1KE





\*Process sealed—withstands soldering and cleaning processes.



Terminal Nos.  
For Reference Only

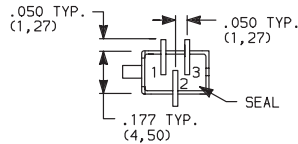
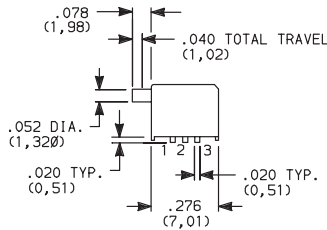
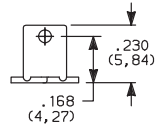
Part No. Shown: GP12MSCKE

PART NO.	SWITCH FUNCTION	
	POS. 1	POS. 2
<b>GP12MSCKE</b>	ON	MOM.
Conn. Terms.	2-1	2-3
Schematic SPDT		

MOM. = Momentary

### SC Surface Mount Terminals SPDT Model

**NOTE:** Recommended for infrequent use applications only. For increased switch mounting strength, order, SV1 termination style with support bracket (see below).



Terminal Nos.  
For Reference Only

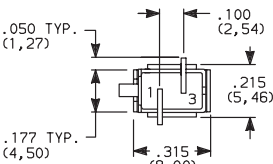
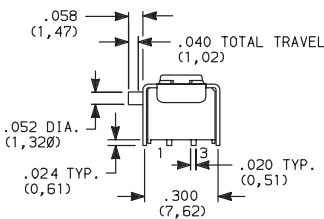
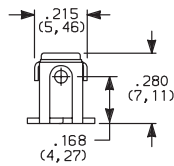
Part No. Shown: GP12MSC1KE

PART NO.	SWITCH FUNCTION	
	POS. 1	POS. 2
<b>GP12MSC1KE</b>	ON	MOM.
Conn. Terms.	2-1	2-3
Schematic SPDT		

MOM. = Momentary

### SC1 Surface Mount Terminals SPDT Model

**NOTE:** Recommended for infrequent use applications only. For increased switch mounting strength, order, SV1 termination style with support bracket (see below).



Terminal Nos.  
For Reference Only

Part No. Shown: GP11MSV1KE

PART NO.	SWITCH FUNCTION	
	POS. 1	POS. 2
<b>GP11MSV1KE</b>	OFF	MOM.
Conn. Terms.	OPEN	1-3
Schematic SPST		
<b>GP12MSV1KE</b>	ON	MOM.
Conn. Terms.	2-1	2-3
Schematic SPDT		

MOM. = Momentary

### SV1 Surface Mount Terminals SPST and SPDT Models

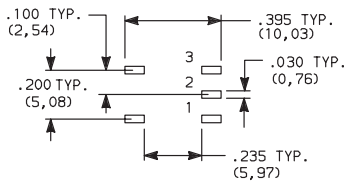




\*Process sealed—withstands soldering and cleaning processes.

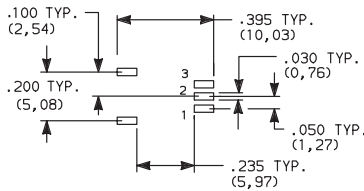
### PC MOUNTING

SA Terminal Style



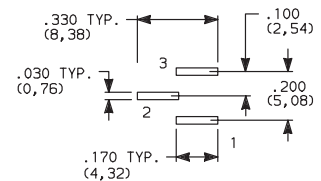
GP11—omit pad 2.

SA1 Terminal Style

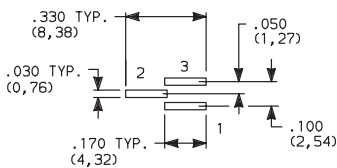


GP11—omit pad 2.

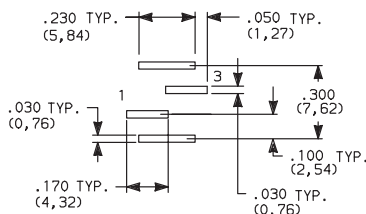
SC Terminal Style



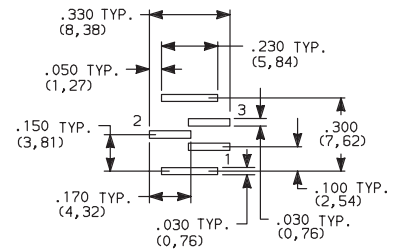
SC1 Terminal Style



SV1 Terminal Style GP11 Models



SV1 Terminal Style GP12 Models



**CAUTION:** PC mounting layouts and pads as shown are designed to be compatible with the latest equipment and reflow techniques. Care should be taken in the design and location of PC lands to suit individual needs. Orientation relative to reflow direction may significantly impact solder joint integrity.

### HOW TO ORDER

Complete part numbers for GP SERIES SEALED ULTRA-MINIATURE SURFACE MOUNT PUSHBUTTON SWITCHES are shown on pages C-60 and C-61. Switches available on embossed anti-static tape and reels per EIA 481-3, consult factory. GP Series thru-hole models also available, see pages C-57 thru C-59.

### 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 milliohms typ. initial @ 2–4 V DC, 100 mA.
- INSULATION RESISTANCE: 10<sup>9</sup> ohms min.
- DIELECTRIC STRENGTH: 500 V RMS 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: Switches available on embossed anti-static tape and reels per EIA 481-3. Tape and cover strip are conductive for use near statically sensitive components, consult factory.

### 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.
- MOVEABLE CONTACTS: Beryllium copper with gold plate over nickel plate.
- TERMINALS: Copper alloy, with tin-lead alloy over nickel plate.
- TERMINAL SEAL: Epoxy. All terminals insert molded.

**NOTE:** Specifications and materials listed above are general specifications for switches with standard options. For information on specific and custom switches, consult factory.

