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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

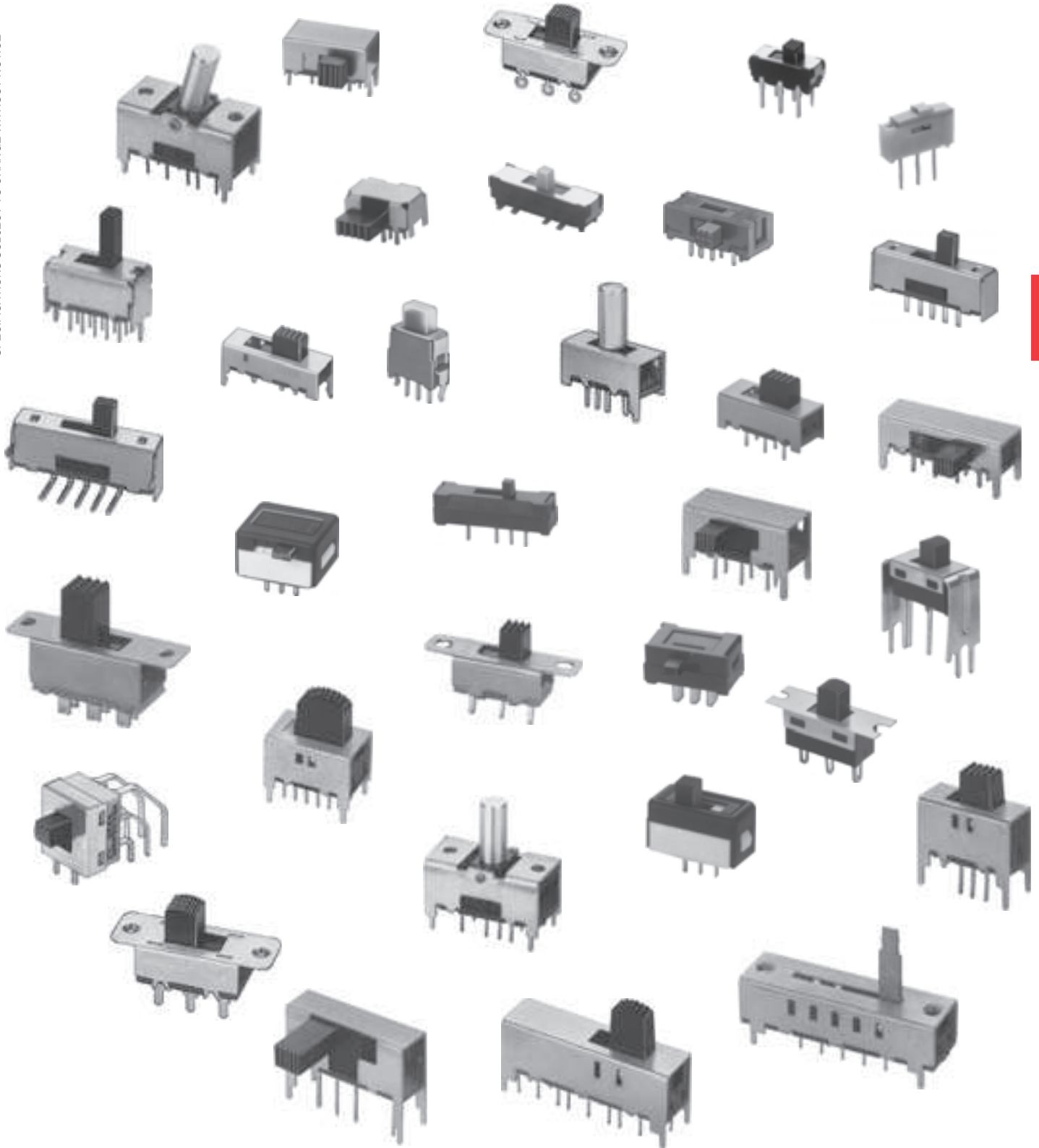
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



SLIDE SWITCHES

SEE PUSHBUTTON SWITCH SELECTION GUIDE ON NEXT PAGE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



SLIDE SWITCHES

SLIDE SWITCH SELECTION GUIDE: This catalog contains an extensive variety of slide switches with numerous options and accessories. To facilitate easy selection of the desired switch for your application, the guide on pages E2 & E3 lists the various Series with some key selection parameters.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

E

MICROMINIATURE SLIDE SWITCHES								
SERIES	POLES	POS-ITIONS	RATINGS	WASH-ABLE	LIFE CYCLES	MOUNTING	ACTUATION	PAGE(S)
TG (SMT)	1	2&3	0.4 VA @ 20V	Yes	60,000	Surface	Vertical	E4-E7
MJS	1&2	2&3	100 ma @ 12VDC	No	10,000	P.C. thru-hole	Vert. & rt. angle	E8-E9
MSSA & MSSB	2	2	100 ma @ 30VDC or 125VAC & dry circuit	No	10,000	P.C. thru-hole	Vert. & rt. angle	E10
MA	1	2&3	300 ma @ 4VDC	No	10,000	Surface	Rt. angle	E11
MHSS	1&2	2	300 ma @ 6VDC	No	5000	P.C. thru-hole	Vert. & rt. angle	E12
MS	1,2&4	2&3	300 ma @ 6VDC	No	10,000	P.C. thru-hole & surface	Vert. & rt. angle	E13-E15
MMPS <i>New!</i>	1	2&3	300 ma @ 4VDC	No	10,000	Surface	Right angle	E15
MMS	1,2,4&6	2&3	300 ma @ 30VDC	No	10,000	P.C. thru-hole	Vert. & rt. angle	E16-E17
TG	1	2&3	500 ma @ 48V (AC or DC) & dry circuit	Some	30,000 & 60,000	P.C. thru-hole	Vert. & rt. angle	E18-E20
NK	1	2	500 ma @ 12V	No	1000	P.C. thru-hole	Vertical	E21
MINIATURE SLIDE SWITCHES								
SERIES	POLES	POS-ITIONS	RATINGS	WASH-ABLE	LIFE CYCLES	MOUNTING	ACTUATION	PAGE(S)
MSTS	1&2	3	300 ma @ 28VDC	Yes	10,000	P.C. thru-hole	Vertical	E22
MHS <i>New!</i>	1&2	2&3	300 ma @ 30VDC	Yes	10,000	P.C. thru-hole	Vertical	E23-E26
SLB	1&2	2,3,4&5	300 ma @ 30VDC or 125 VAC	Yes	10,000	P.C. thru-hole	Vert. & rt. angle	E27-E34
SLC	1&2	2	300 ma @ 30VDC or 125 VAC	Yes	10,000	Panel	Vertical	E35
SLG	1	2	300 ma @ 30VDC or 125 VAC	Yes	10,000	P.C. thru-hole & panel	Vertical	E36
SLA	1&2	2	500 ma @ 125VAC	Yes	10,000	P.C. thru-hole & panel	Vertical	E37-E38
SLE	1&2	2	500 ma @ 125VAC	Yes	10,000	P.C. thru-hole & panel	Vertical	E38-E39
G	1&2	2&3	4 amps @ 125VAC, 2 amps @ 250 VAC or 3 amps @ 30 VDC & dry circuit	No	20,000 - 60,000	P.C. thru-hole & panel	Vert. & rt. angle	E40-E44
25000N	1&2	2&3	4 amps @ 125 VAC, 2 amps @ 250 VAC or 3 amps @ 30 VDC & dry circuit	No	10,000 - 20,000	P.C. thru-hole	Vert. & rt. angle	E45-E49
STANDARD SIZE SLIDE SWITCHES								
SERIES	POLES	POS-ITIONS	RATINGS	WASH-ABLE	LIFE CYCLES	MOUNTING	ACTUATION	PAGE(S)
MSS	1,2&4	2,3&4	300 ma @ 30VDC or 125 VAC & dry circuit	Yes	10,000	P.C. thru-hole	Vert. & rt. angle	E50-E52
M	1,2,4, 6&8	2&3	300 ma @30VDC or 125 VAC	Yes	10,000	P.C. thru-hole	Vert. & rt. angle	E53-E57
PM	1&2	2	6 amps @ 125 VAC or 3 amps @ 250 VAC	Yes	10,000	Panel	Vertical	E58

SLIDE SWITCHES

SLIDE SWITCH SELECTION GUIDE (CONT'D.)

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MINIATURE PUSHBUTTON STYLE SLIDE SWITCHES								
SERIES	POLES	POS- ITIONS	RATINGS	WASH- ABLE	LIFE CYCLES	MOUNTING	ACTUATION	PAGE(S)
MPS	PB-1 SL-1	PB-1 SL-3	PB - 0.4 VA @ 20 V max. Slide - 300 ma @ 30VDC/125VAC	No	100,000	P.C. thru-hole	Rt. angle	E59
SINGLE POLE MULTI-POSITION SLIDE SWITCHES								
SERIES	POLES	POS- ITIONS	RATINGS	WASH- ABLE	LIFE CYCLES	MOUNTING	ACTUATION	PAGE(S)
MSL	1	3,5&6	200 ma @ 30VDC/125VAC	Yes	10,000	P.C. thru-hole	Vertical	E60
BATON TOGGLE STYLE SLIDE SWITCHES								
SERIES	POLES	POS- ITIONS	RATINGS	WASH- ABLE	LIFE CYCLES	MOUNTING	ACTUATION	PAGE(S)
MBT	2,4&6	2,3&4	300 ma @ 30VDC/125VAC	Yes	10,000	P.C. thru-hole	Toggle	E61-E63

E

ALPHA-NUMERIC INDEX BY SERIES

<u>SERIES</u>	<u>Page (s)</u>	<u>SERIES</u>	<u>Page (s)</u>
G	E40 - E44	MSSA	E10
M	E53 - E57	MSSB	E10
MA	E11	MSTS	E22
MBT	E61 - E63	NK	E21
MHS	E23 - E26	PM	E58
MHSS	E12	SLA	E37 - E38
MMPS	E15	SLB	E27 - E34
MJS	E8 - E9	SLC	E35
MMS	E16 - E17	SLE	E38 - E39
MPS	E59	SLG	E36
MS	E13 - E15	25000N	E45 - E49
MSL	E60	TG	E18 - E20
MSS	E50 - E52	TG (SMT)	E4 - E7

TG SERIES - SMT WASHABLE TINY SLIDE SWITCHES

DESIGNED EXCLUSIVELY FOR SURFACE MOUNTING

SMT TG Series switches incorporate many desirable features that include:

● **Tape & reel packaging**

This type of packaging is recommended for:

- economy
- suitability for automated placement
- handling of large quantities of components per packaging unit
- positive component positioning
- protection of terminals against damage during handling
- high static resistance

● **Reflow solderable**

- High temperature plastic materials
- Tin plated grounding brackets
- Tin-lead alloy over nickel terminal plating
- Terminals turned outward to prevent the shadow effect in infrared soldering and to permit visual inspection of the solder joints
- .021" (0.55mm) air gap between p.c. board and switch case
- End stackable with .400" (10.16mm) pitch
- Available with positioning pins to assure correct switch orientation during the reflow process and provide additional mechanical integrity

● **Washable**

Switches are designed to withstand cleaning processes, including hot water under pressure.

Surface mount devices (SMD) are subject to more stringent constraints of temperature, solderability, sealing and space savings than through-hole components.

To meet these requirements, APEM has designed a family of tiny surface mount switches that include TL Series toggle switches, TP Series pushbutton switches, TR Series rocker switches & TG Series slide switches. See toggle, pushbutton & rocker switch sections of catalog for TL, TP & TR Series respectively.



TG SERIES - SMT WASHABLE TINY SLIDE SWITCHES

ELECTRICAL SPECIFICATIONS

Contact ratings (resistive lds.):	0.4 VA at 20 V max. (AC or DC)
Minimum load:	10 mA at 50 mV or 10µA at 5 VD
Initial contact resistance:	20 milliohms maximum
Insulation resistance:	1000 MΩ min. at 500 VDC
Dielectric strength:	1000 V rms between terminals & frame. 500 V rms between terminals
Electrical life (at full load):	2 position switches: 60,000 cycles 3 position switches: 30,000 cycles
Static resistance:	10 KV (Schaffner equipment)

GENERAL SPECIFICATIONS

Travel:	.102" (2.60mm)
Operating temperature range:	-40°C to +85°C
Moisture resistance:	21 days per IEC 512-6 test 11c
Vibration resistance:	10-500 Hz/10g per IEC 512-4 test 6d
Shock resistance:	50 g per IEC 512-4 test 6c

MATERIALS

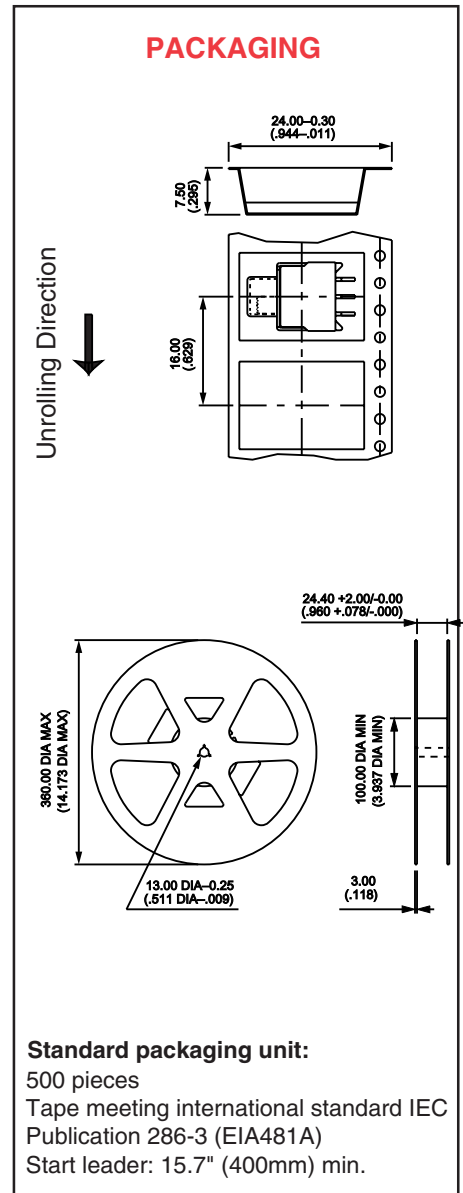
Case:	High temperature plastic UL94V-0
Actuator:	High temperature plastic UL94V-0
Grounding brackets:	Tin plated steel (includes positioning pins)
Contacts:	Gold plated brass
Terminals:	Brass with tin-lead alloy over nickel plate
Terminal seal:	Epoxy

SOLDERING AND CLEANING

Reflow soldering:	Infrared, vapor phase and infrared convection
Washable:	Per IEA-RS448-2: water and detergent - preferred. Solvents.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

PACKAGING



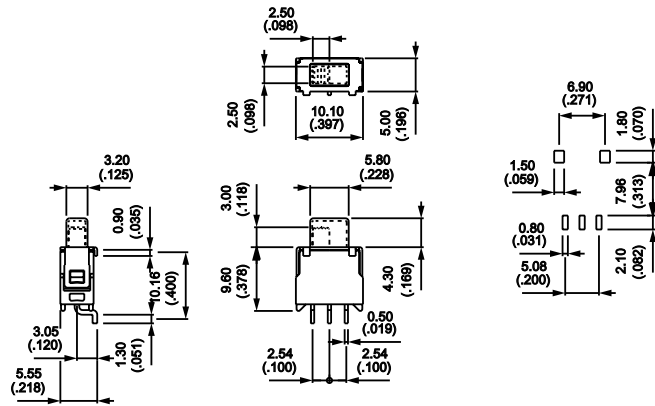
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TG SERIES - SMT WASHABLE TINY SLIDE SWITCHES

Single pole slide switches



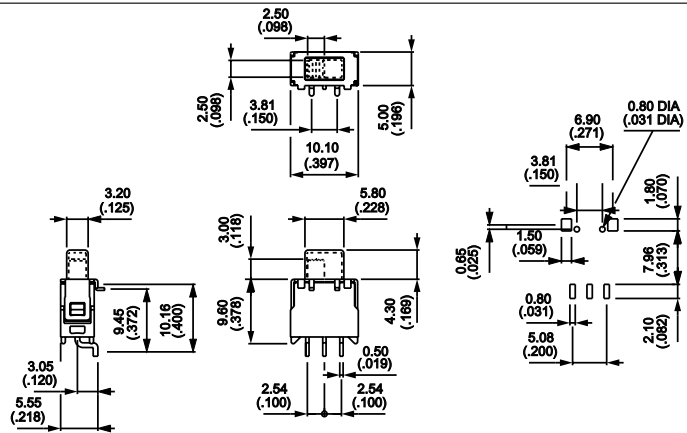
MODEL NO.	CIRCUIT
TG36WS80050	ON - ON
TG39WS80050	ON OFF ON



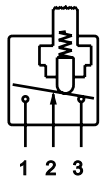
Single pole slide switches with positioning pins



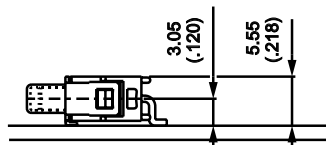
MODEL NO.	CIRCUIT
TG36WS80065	ON - ON
TG39WS80065	ON OFF ON



SWITCH ACTION



P.C. BOARD DIMENSIONS



LED INDICATOR IN TINY PACKAGE

ELECTRICAL SPECIFICATIONS

Forward voltage: Red; 3.0 volts at 10 milliamps (2V typical)
Green; 3.0 volts at 20 milliamps (2.2V typical)
Yellow; 3.0 volts at 10 milliamps (2.1V typical)

Reverse voltage: 5.0 volts minimum

Viewing angle (total): 90°

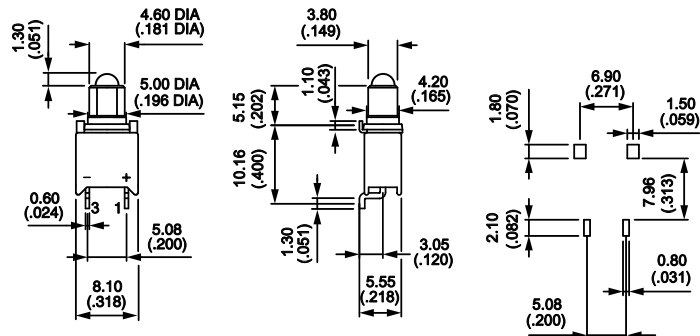
Wavelength: Red; 635 nm
Green; 565 nm
Yellow; 585 nm

PACKAGING

Tape & reel



MODEL NO.	COLOR
TV01WS00100	Red
TV02WS00100	Green
TV03WS00100	Yellow



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

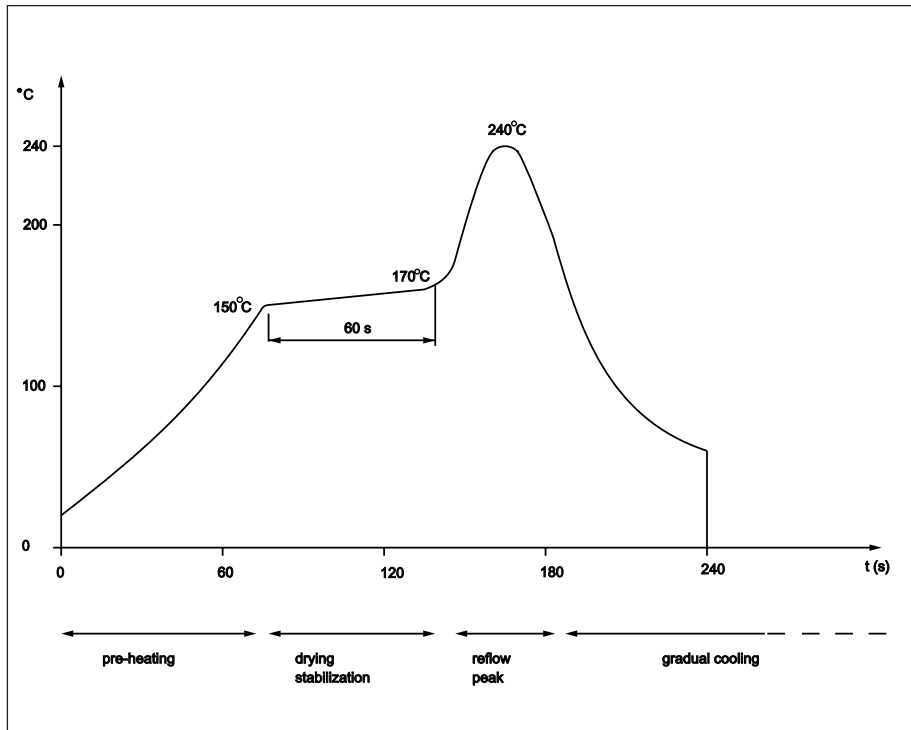
TG SERIES - SMT WASHABLE TINY SLIDE SWITCHES

REFLOW SOLDERING - STANDARD PROFILE

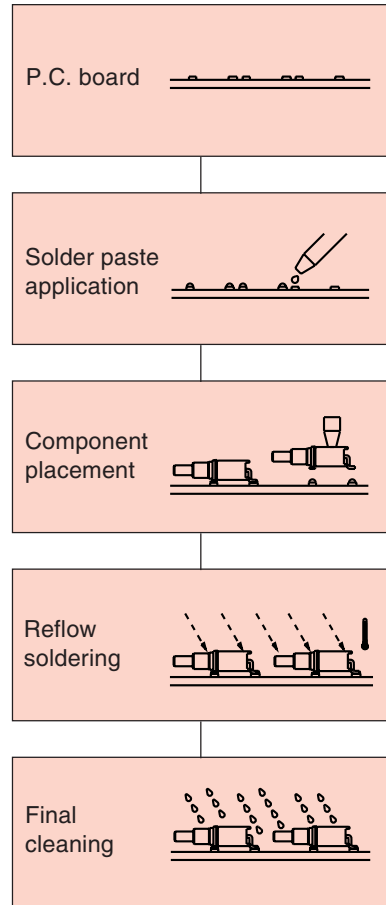
The printed circuit board, carried by a conveyor belt, travels through the reflow soldering oven and experiences the following programmed cycles:

- pre-heat to a maximum of 200°C for 30 seconds
- reflow at a maximum of 245°C for 10 seconds
- final cleaning

TEMPERATURE/TIME PROFILE (typical)



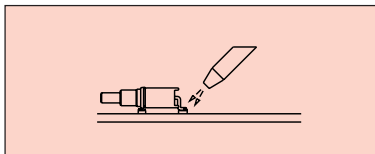
PROCESSING STEPS



E

P.C. BOARD REWORK RECOMMENDATIONS

Hot air reflow technique is preferred. Avoid the use of a soldering iron.





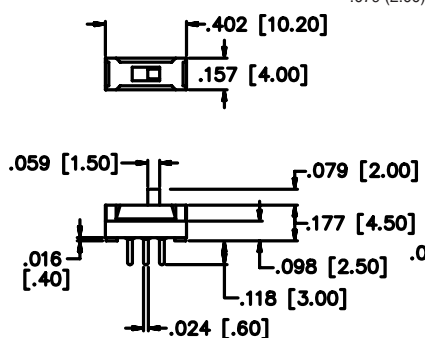
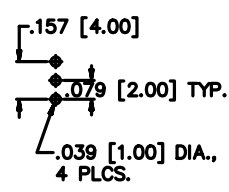
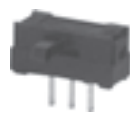
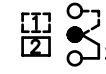
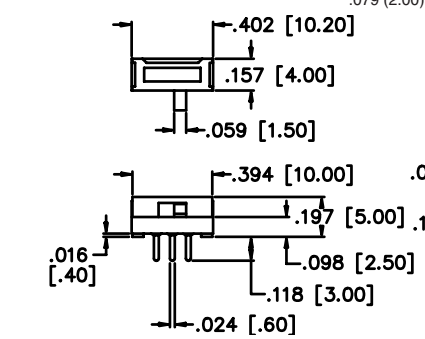
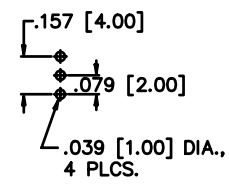
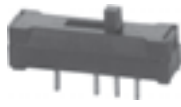
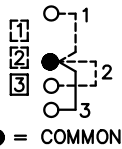
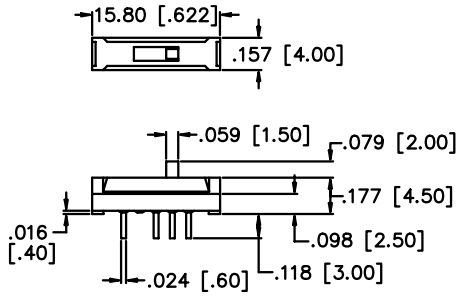
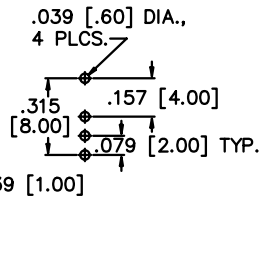
Caution: Excessive and/or repeated high temperature exposure may affect switch performance & reliability.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MJS Series

Microminiature Slide Switches

SPECIFICATIONS	FEATURES
Contact rating: 100 mA at 12 VDC Initial contact resistance: 20 milliohms max. Insulation resistance: 100 megohms min. at 500 VDC Dielectric strength: 500 volts RMS at sea level Electrical life: 10,000 cycles min. Operating temperature range: -10°C to +60°C Actuation force: 225g (average) Solder heat resistance: 260°C max. for 5 seconds Washing not recommended	<ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Molded-in terminals minimize flux or solder entry. ● Molded-in high temperature phenolic base. ● Low Profile.
	MATERIALS
	Contacts & terminals: Silver plated Case & actuator: Thermoplastic Terminal seal: Molded-in




MODEL NO.			
MJS12			
	1P2T  ● = COMMON	 MECHANICAL OUTLINE	 P.C. BOARD LAYOUT
VERTICAL ACTUATOR	SCHEMATIC	MECHANICAL OUTLINE	P.C. BOARD LAYOUT
MODEL NO.			
MJS12R			
	1P2T  ● = COMMON	 MECHANICAL OUTLINE	 P.C. BOARD LAYOUT
RIGHT ANGLE ACTUATOR	SCHEMATIC	MECHANICAL OUTLINE	P.C. BOARD LAYOUT
MODEL NO.			
MJS13			
	1P3T  ● = COMMON	 MECHANICAL OUTLINE	 P.C. BOARD LAYOUT
VERTICAL ACTUATOR	SCHEMATIC	MECHANICAL OUTLINE	P.C. BOARD LAYOUT

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MJS Series

Microminiature Slide Switches


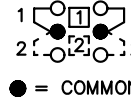
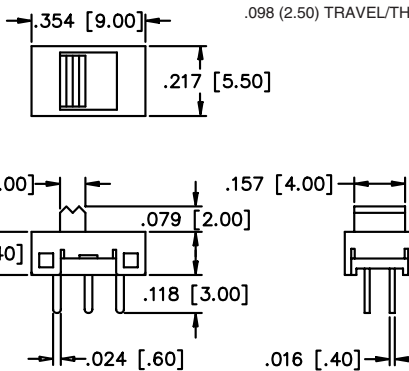
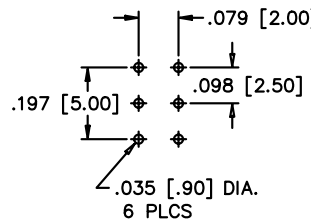
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


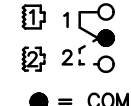
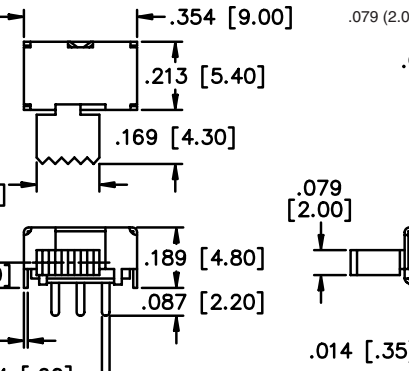
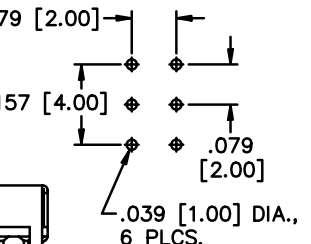
<p>MODEL NO.</p> <p>MJS13R</p> <div style="text-align: center;">  </div> <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p>	<p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p>1P3T</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Schematic diagram showing a 1P3T switch configuration with terminals 1, 2, and 3. Terminal 2 is marked as common.</p> <p>● = COMMON</p> </div> <div style="width: 35%;"> <p>Mechanical outline showing dimensions: .622 [15.80], .157 [4.00], .059 [1.50], .016 [.40], .197 [5.00], .098 [2.50], .118 [3.00], .024 [.60], .138 [3.50], .039 [1.00], .016 [.40].</p> </div> <div style="width: 30%;"> <p>P.C. Board layout showing dimensions: .315 [8.00], .157 [4.00], .079 [2.00] TYP., .039 [1.00] DIA., 4 PLCS.</p> </div> </div>
<p>MODEL NO.</p> <p>MJS22</p> <div style="text-align: center;">  </div> <p style="text-align: center;">VERTICAL ACTUATOR</p>	<p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p>2P2T</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Schematic diagram showing a 2P2T switch configuration with terminals 1 and 2. Terminal 2 is marked as common.</p> <p>● = COMMON</p> </div> <div style="width: 35%;"> <p>Mechanical outline showing dimensions: .236 [6.00], .394 [10.00], .098 [2.50], .059 [1.50], .177 [4.50], .047 [1.20], .079 [2.00], .024 [.60], .118 [3.00], .016 [.40].</p> </div> <div style="width: 30%;"> <p>P.C. Board layout showing dimensions: .157 [4.00], .079 [2.00], .079 [2.00], .039 [1.00] DIA., 6 PLCS.</p> </div> </div>
<p>MODEL NO.</p> <p>MJS22R</p> <div style="text-align: center;">  </div> <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p>	<p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p>2P2T</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Schematic diagram showing a 2P2T switch configuration with terminals 1 and 2. Terminal 2 is marked as common.</p> <p>● = COMMON</p> </div> <div style="width: 35%;"> <p>Mechanical outline showing dimensions: .236 [6.00], .059 [1.50], .394 [10.00], .098 [2.50], .197 [5.00], .118 [3.00], .016 [.40], .024 [.60] TYP., .138 [3.50], .039 [1.00], .016 [.40].</p> </div> <div style="width: 30%;"> <p>P.C. Board layout showing dimensions: .079 [2.00], .157 [4.00], .079 [2.00], .039 [1.00] DIA., 6 PLCS.</p> </div> </div>

E

MSSA & MSSB Series

Microminiature Slide Switches

SPECIFICATIONS		FEATURES		
<p>Contact ratings: Gold; 0.4 Volt-Amps (VA) max. at 20 V max. (AC or DC) Silver; 100 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 30 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 250 VDC</p> <p>Dielectric strength: 250 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: 250g ± 150g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p>		<ul style="list-style-type: none"> ● Low Profile. ● Epoxy sealed terminals. ● Cosmetic molded case. 		
MODEL NO. PLATING		MATERIALS		
MSSA22	SILVER	Contacts & terminals: Gold or silver available (see contact ratings)		
MSSA22G	GOLD	Housing and Actuator: Thermoplastic		
		Base: High temperature thermoplastic		
		Terminal seal: Epoxy		
<p>2P2T</p>  <p>VERTICAL ACTUATOR</p>		 <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>

SPECIFICATIONS		FEATURES		
<p>Contact ratings: Gold; 0.4 Volt-Amps (VA) max. at 20 V max. (AC or DC) Silver; 100 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 250 VDC</p> <p>Dielectric strength: 250 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: 200g ± 150g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p>		<ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Low Profile. ● Epoxy sealed terminals. 		
MODEL NO. PLATING		MATERIALS		
MSSB22R	SILVER	Contacts & terminals: Gold or silver available (see contact ratings)		
MSSB22RG	GOLD	Housing: Tin plated steel		
		Actuator: Thermoplastic		
		Base: Phenolic laminated sheet		
		Terminal seal: Epoxy		
<p>2P2T</p>  <p>RIGHT ANGLE ACTUATOR</p>		 <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>


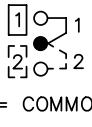
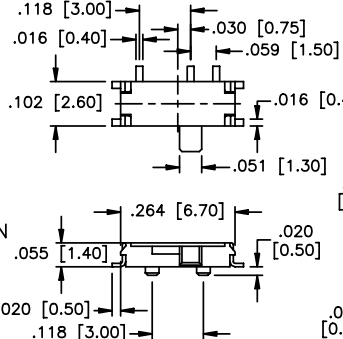
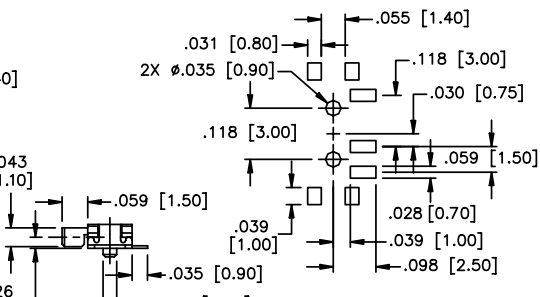
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


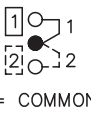
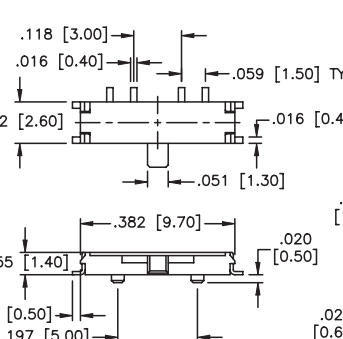
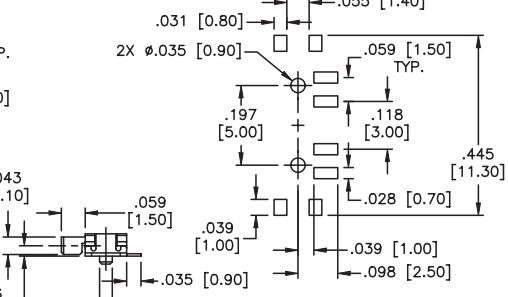
MA Series

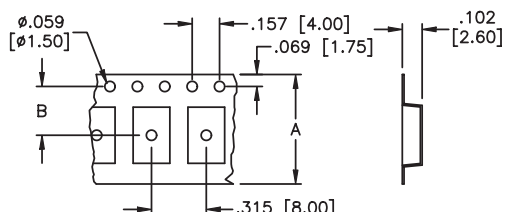
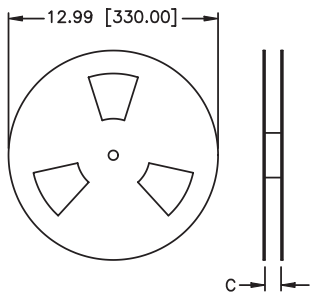
Microminiature Memory Card Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS	FEATURES
<p>Contact rating: 300 mA at 4 VDC</p> <p>Initial contact resistance: 70 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 100 VDC</p> <p>Dielectric strength: 100 VAC for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: 200g ± 100g</p> <p>Solder heat resistance: Reflow - 260°C max. for 1 min. Manual - iron temperature 305 °C max. for 6 seconds.</p> <p>Washing not recommended</p>	<ul style="list-style-type: none"> ● Ultra-compact size. ● Low Profile. ● Surface mounting with restraining bosses. ● Reflow or hand solderable.
MATERIALS	
<p>Contacts: Silver plated beryllium copper</p> <p>Terminals: Silver plated brass</p> <p>Base: Liquid crystal polymer Cover: Tin plated steel</p> <p>Actuator: Liquid crystal polymer</p>	

MODEL NO.	.059 (1.50) TRAVEL/THROW		
MA12R			
 <p>RIGHT ANGLE ACTUATOR</p>	<p>1P2T</p>  <p>● = COMMON</p> <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>

MODEL NO.	.059 (1.50) TRAVEL/THROW		
MA13R			
<p style="color: red; font-weight: bold;">New!</p>  <p>RIGHT ANGLE ACTUATOR</p>	<p>1P3T</p>  <p>● = COMMON</p> <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>


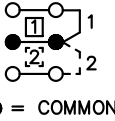
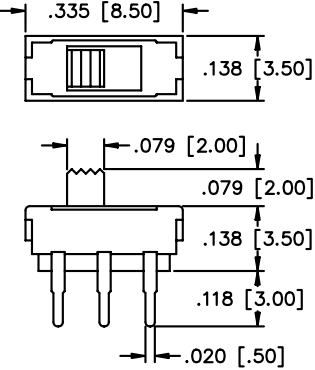
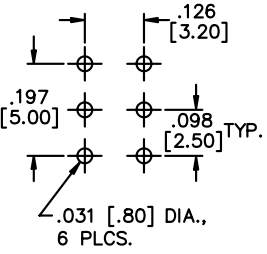

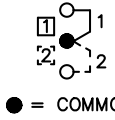
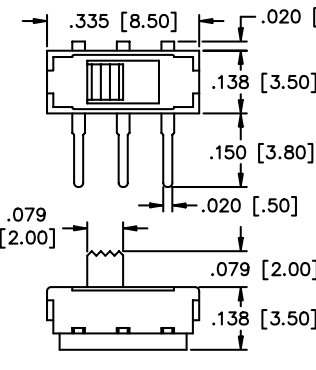
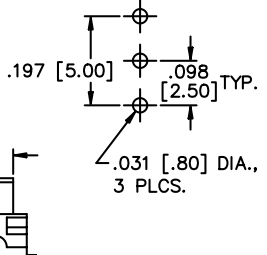

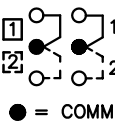
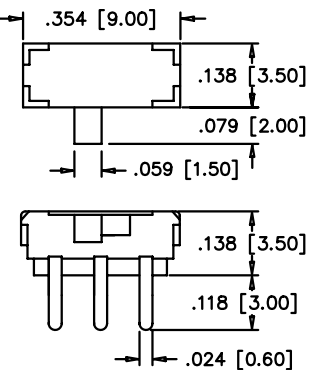
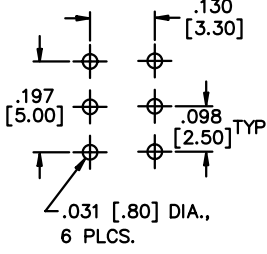
MODEL NO.	CARRIER TAPE		REEL DIMENSIONS												
MA12R/TR MA13R/TR															
Same as above models except supplied on tape & reel as shown.															
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Model No.</th> <th>Dim. A</th> <th>Dim. B</th> <th>Dim. C</th> </tr> </thead> <tbody> <tr> <td>MA12R/TR</td> <td>.630 (16.0)</td> <td>.217 (5.5)</td> <td>.646 (16.4)</td> </tr> <tr> <td>MA13R/TR</td> <td>.945 (24.0)</td> <td>.453 (11.5)</td> <td>.960 (24.4)</td> </tr> </tbody> </table>	Model No.	Dim. A	Dim. B	Dim. C	MA12R/TR	.630 (16.0)	.217 (5.5)	.646 (16.4)	MA13R/TR	.945 (24.0)	.453 (11.5)	.960 (24.4)			
Model No.	Dim. A	Dim. B	Dim. C												
MA12R/TR	.630 (16.0)	.217 (5.5)	.646 (16.4)												
MA13R/TR	.945 (24.0)	.453 (11.5)	.960 (24.4)												

MHSS Series

Microminiature Slide Switches

SPECIFICATIONS	FEATURES
<p>Contact ratings: 300 mA at 6 VDC</p> <p>Initial contact resistance: 60 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 100 VDC</p> <p>Dielectric strength: 100 VAC for 1 minute</p> <p>Electrical life: 5000 cycles min.</p> <p>Operating temperature range: -20°C to +70°C</p> <p>Solder heat resistance: 350°C max. for 3 seconds</p> <p>Washing not recommended</p>	<ul style="list-style-type: none"> ● Excellent tactile feed-back (detent action). ● Molded-in terminals minimize flux or solder entry. ● Ultra-compact case size. ● Low profile.
	MATERIALS
	<p>Contacts & terminals: Silver plated</p> <p>Case: 30% Glass filled nylon, type 6/6, black</p> <p>Actuator: Nylon, type 6/6, black (blue for MHSS2220 only)</p>

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MODEL NO.			
MHSS1104			
	<p>1P2T</p>  <p>● = COMMON</p>	 <p>MECHANICAL OUTLINE</p>	<p>.079 (2.00) TRAVEL/THROW</p>  <p>P.C. BOARD LAYOUT</p>
VERTICAL ACTUATOR	SCHEMATIC	MECHANICAL OUTLINE	P.C. BOARD LAYOUT
MODEL NO.			
MHSS1105			
	<p>1P2T</p>  <p>● = COMMON</p>	 <p>MECHANICAL OUTLINE</p>	<p>.079 (2.00) TRAVEL/THROW</p>  <p>P.C. BOARD LAYOUT</p>
RIGHT ANGLE ACTUATOR	SCHEMATIC	MECHANICAL OUTLINE	P.C. BOARD LAYOUT
MODEL NO.			
MHSS2220			
	<p>2P2T</p>  <p>● = COMMON</p>	 <p>MECHANICAL OUTLINE</p>	<p>.079 (2.00) TRAVEL/THROW</p>  <p>P.C. BOARD LAYOUT</p>
RIGHT ANGLE ACTUATOR	SCHEMATIC	MECHANICAL OUTLINE	P.C. BOARD LAYOUT


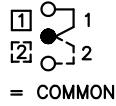
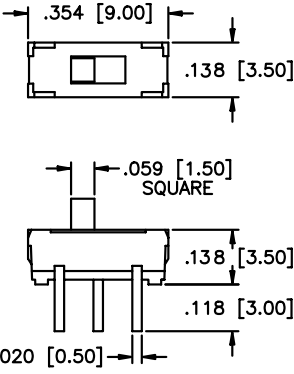
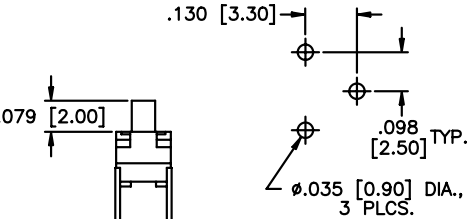

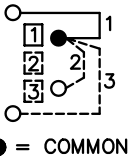
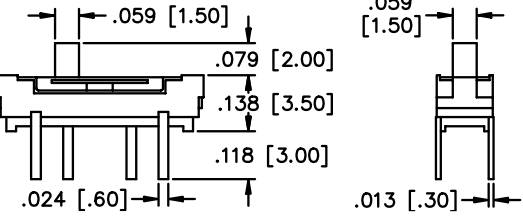
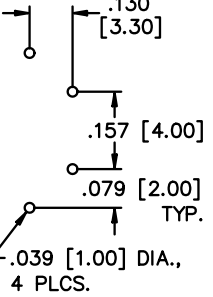

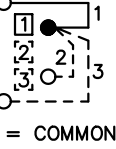
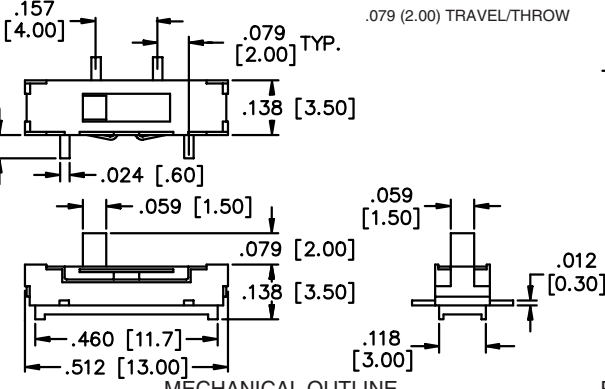
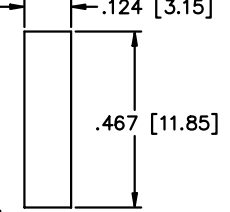
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MS Series

Microminiature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS	FEATURES
<p>Contact rating: 300 mA at 6 VDC</p> <p>Initial contact resistance: 70 milliohms max.</p> <p>Insulation resistance: 100 megohms max. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p>	<ul style="list-style-type: none"> ● Low profile. ● Insert molded terminals. ● Stainless steel cover.
MATERIALS	
<p>Contacts & terminals: Silver plated</p> <p>Cover: Stainless steel</p> <p>Actuator: Thermoplastic</p> <p>Base: High temperature thermoplastic Terminal seal: Insert molded</p>	

MODEL NO.			
MS12	1P2T	.079 (2.00) TRAVEL/THROW	
 <p>VERTICAL ACTUATOR</p>	 <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>
MS13	1P3T	.079 (2.00) TRAVEL/THROW	
 <p>VERTICAL ACTUATOR</p>	 <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD CUTOUT</p>
MS13S	1P3T	.079 (2.00) TRAVEL/THROW	
 <p>VERTICAL ACTUATOR</p>	 <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>



MS Series

Microminiature Slide Switches

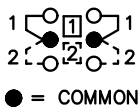
MODEL NO.

MS22

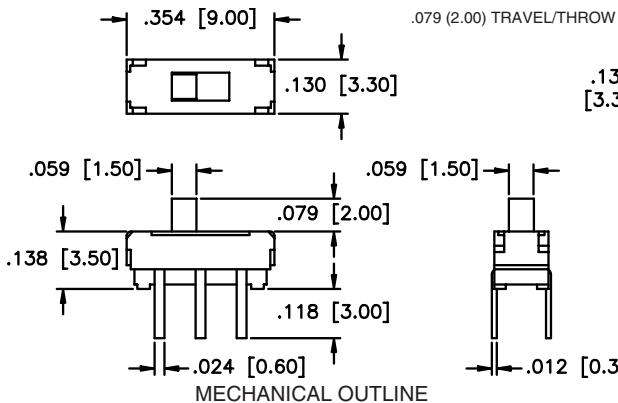


VERTICAL ACTUATOR

2P2T



SCHEMATIC



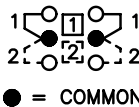
MODEL NO.

MS22R

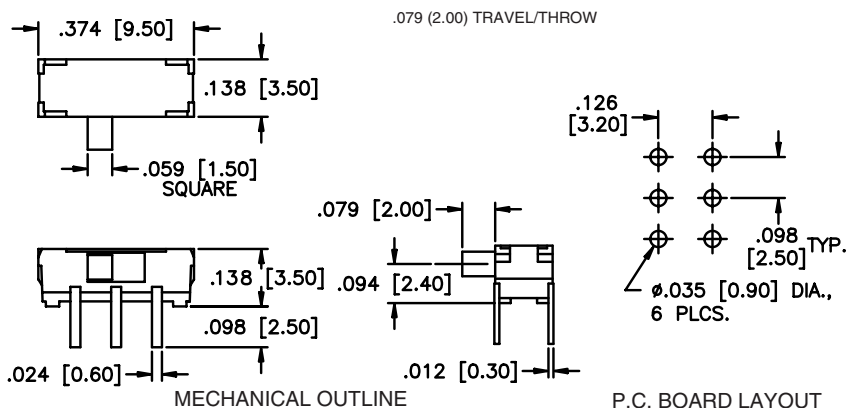


RIGHT ANGLE ACTUATOR

2P2T



SCHEMATIC



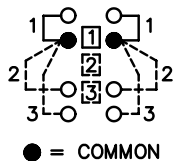
MODEL NO.

MS23

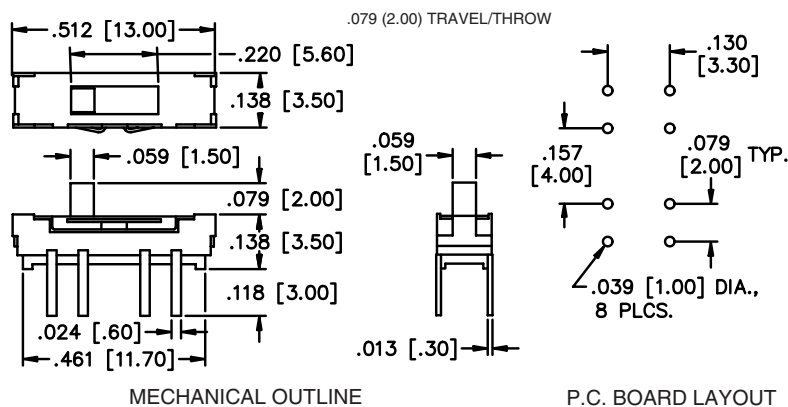


VERTICAL ACTUATOR

2P3T



SCHEMATIC



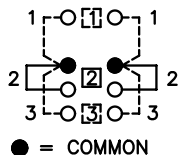
MODEL NO.

MS23R

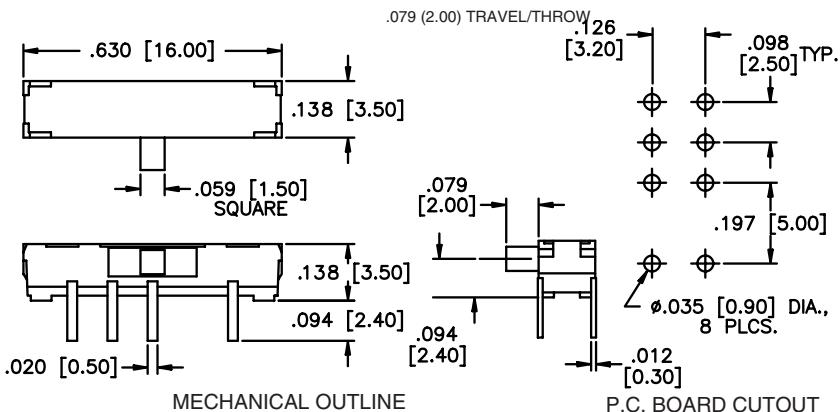


RIGHT ANGLE ACTUATOR

2P3T



SCHEMATIC



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MODEL NO.	<p>2P3T</p> <p>● = COMMON</p>	<p>MECHANICAL OUTLINE</p>	<p>P.C. BOARD CUTOUT</p>
MS23S			
VERTICAL ACTUATOR			
MODEL NO.	<p>4P2T</p> <p>● = COMMON</p>	<p>MECHANICAL OUTLINE</p>	<p>P.C. BOARD LAYOUT</p>
MS42R			
RIGHT ANGLE ACTUATOR			



New!

MMPS Series

Microminiature Pushbutton Style Slide Switches

SPECIFICATIONS	FEATURES
<p>Contact rating: 300 mA at 4 VDC</p> <p>Initial contact resistance: 70 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 100 VDC</p> <p>Dielectric strength: 100 VAC for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: Pushbutton; 200g average Slide; 275g average</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p>	<ul style="list-style-type: none"> ● Surface mounting configuration. ● Combination momentary pushbutton & slide switch mechanism. ● Ultra-low profile & ultra-compact case. ● Molded-in terminal seal.
	MATERIALS
	<p>Contacts: Gold plated copper alloy</p> <p>Frame: Stainless steel Actuator: 6/6 Nylon or PA</p> <p>Base: High temperature PPS</p> <p>Terminal seal: Molded-in</p>

MODEL NO.	<p>1P2T, (PB) 1P3T, (Slide)</p> <p>● = COMMON</p>	<p>MECHANICAL OUTLINE</p>	<p>P.C. BOARD LAYOUT</p>
MMPS101			
RIGHT ANGLE ACTUATOR			

MMS Series

Microminiature Slide Switches

SPECIFICATIONS	FEATURES
<p>Contact ratings: 300 mA at 30 VDC</p> <p>Initial contact resistance: 25 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +70°C</p> <p>Solder heat resistance: 255°C max. for 5 seconds max.</p> <p>Washing not recommended</p>	<ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Low Profile. ● Epoxy sealed terminals. ● Cosmetic molded case.
MATERIALS	
<p>Contacts & terminals: Silver plated</p> <p>Case: Polyacetal</p> <p>Actuator: PBT Base: Glass filled PBT</p> <p>Terminal seal: Epoxy or phenol resin</p>	

E


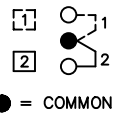
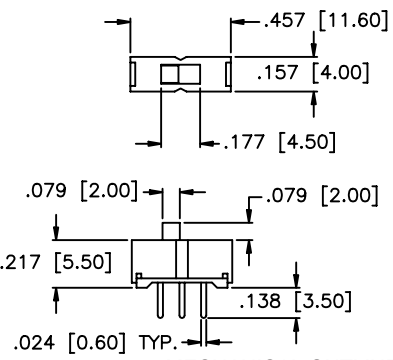
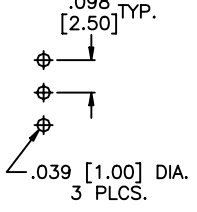

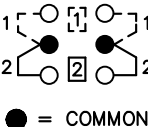
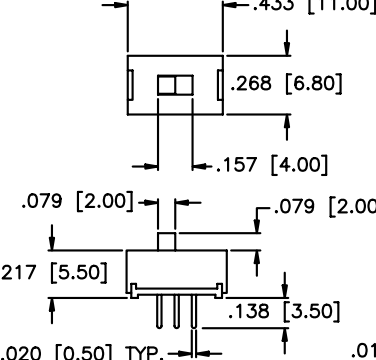
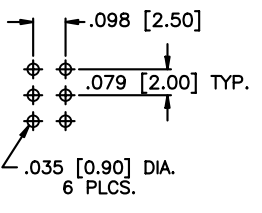

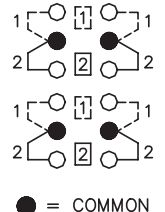
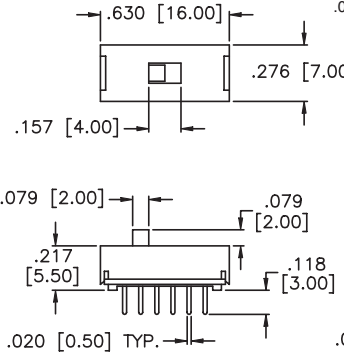
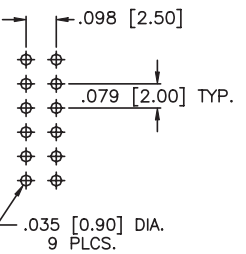

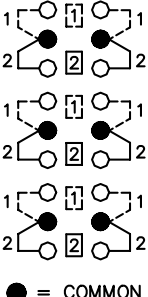
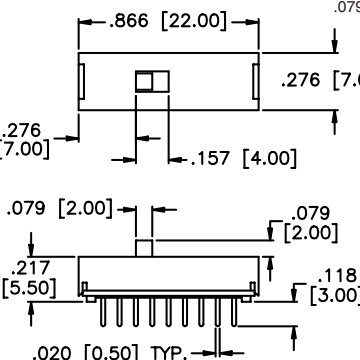
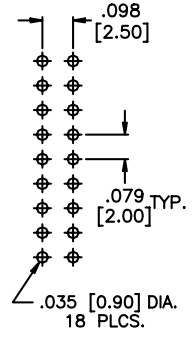
<p>MODEL NO.</p> <p style="color: red; font-weight: bold;">MMS22R</p>	<p style="font-size: 1.2em; font-weight: bold;">2P2T</p> <p>● = COMMON</p>	<p style="text-align: center;">MECHANICAL OUTLINE</p>	<p style="text-align: center;">P.C. BOARD LAYOUT</p>
<p>MODEL NO.</p> <p style="color: red; font-weight: bold;">MMS23R</p>	<p style="font-size: 1.2em; font-weight: bold;">2P3T</p> <p>● = COMMON</p>	<p style="text-align: center;">MECHANICAL OUTLINE</p>	<p style="text-align: center;">P.C. BOARD LAYOUT</p>
<p>MODEL NO.</p> <p style="color: red; font-weight: bold;">MMS42R</p>	<p style="font-size: 1.2em; font-weight: bold;">4P2T</p> <p>● = COMMON</p>	<p style="text-align: center;">MECHANICAL OUTLINE</p>	<p style="text-align: center;">P.C. BOARD LAYOUT</p>

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MMS Series

Microminiature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

<p>MODEL NO.</p> <p>MMS1208</p> <div style="text-align: center;">  </div> <p>VERTICAL ACTUATOR</p>	<p>1P2T</p> <p style="text-align: right;">.098 (2.50) TRAVEL/THROW</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>● = COMMON</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div>
<p>MODEL NO.</p> <p>MMS2214</p> <div style="text-align: center;">  </div> <p>VERTICAL ACTUATOR</p>	<p>2P2T</p> <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>● = COMMON</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div>
<p>MODEL NO.</p> <p>MMS42</p> <p style="color: red; font-weight: bold; font-size: 1.2em;">New!</p> <div style="text-align: center;">  </div> <p>VERTICAL ACTUATOR</p>	<p>4P2T</p> <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>● = COMMON</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div>
<p>MODEL NO.</p> <p>MMS6202</p> <div style="text-align: center;">  </div> <p>VERTICAL ACTUATOR</p>	<p>6P2T</p> <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>● = COMMON</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div>

E

TG Series

Microminiature Slide Switches

SPECIFICATIONS	FEATURES
<p>Contact ratings: Gold; 0.4 Volt-Amps max. at 20 V max. Silver; 500 mA at 48 V max. (AC or DC)</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 1000 megohms min. at 500 VDC</p> <p>Dielectric strength: 1000 V rms min. between terms. and ground plate (and bracket)</p> <p>Electrical life: 2 position switches-60,000 cycles min. 3 position switches-30,000 cycles min.</p> <p>Operating temperature range: -30°C to +85°C</p> <p>Solder heat resistance: 260°C for 5 seconds max.</p> <p>Washing: Permissible (with model option 50)</p>	<ul style="list-style-type: none"> ● Ultra-compact case size. ● Washable models. ● SPDT maintained action with long electrical life. ● See additional options on pg. E20.
MATERIALS	
<p>Contacts & terminals: Gold or silver available (see contact ratings)</p> <p>Actuator: Thermoplastic</p> <p>Ground plate & bracket: Tin plated steel</p> <p>Case: Flame retardant thermoplastic Terminal seal: Epoxy</p> <p>Washable seal: Translucent silicone rubber (with model option 50)</p>	

E

MODEL NO.	PLATING	ACTION	STRAIGHT P.C. TERMINALS - STANDARD MODELS
TG36P000000	Gold	on - on	<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="width: 45%;"> <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%;"> <p>TRAVEL/THROW; .102 (2.60)</p> <p>P.C. BOARD LAYOUT</p> </div> </div>
TG39P000000	Gold	on off on	
TG36P010000	Silver	on - on	
TG39P010000	Silver	on off on	
MODEL NO.	PLATING	ACTION	STRAIGHT P.C. TERMINALS - WASHABLE MODELS
TG36P000050	Gold	on - on	<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="width: 45%;"> <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%;"> <p>TRAVEL/THROW; .102 (2.60)</p> <p>P.C. BOARD LAYOUT</p> </div> </div>
TG39P000050	Gold	on off on	
TG36P010050	Silver	on - on	
TG39P010050	Silver	on off on	
<p>PROCESS COMPATIBLE</p>			
MODEL NO.	PLATING	ACTION	STRAIGHT P.C. TERMINALS - BRACKET MTG. - STANDARD MODELS
TG36Y000000	Gold	on - on	<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="width: 45%;"> <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%;"> <p>TRAVEL/THROW; .102 (2.60)</p> <p>P.C. BOARD LAYOUT</p> </div> </div>
TG39Y000000	Gold	on off on	
TG36Y010000	Silver	on - on	
TG39Y010000	Silver	on off on	

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

TG Series

Microminiature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MODEL NO.	PLATING	ACTION	STRAIGHT P.C. TERMINALS - BRACKET MTG. - WASHABLE MODELS	TRAVEL/THROW; .102 (2.60)
TG36Y000050	Gold	on - on	<p>FUNCTION (see page e 20)</p>	
TG39Y000050	Gold	on off on		
TG36Y010050	Silver	on - on		
TG39Y010050	Silver	on off on		
<p>PROCESS COMPATIBLE</p>			<p>P.C. BOARD LAYOUT</p>	
MODEL NO.	PLATING	ACTION	RIGHT ANGLE TERMINALS - HORIZONTAL MTG. - STANDARD MODELS	TRAVEL/THROW; .102 (2.60)
TG36W000000	Gold	on - on	<p>FUNCTION (see page e 20)</p>	
TG39W000000	Gold	on off on		
TG36W010000	Silver	on - on		
TG39W010000	Silver	on off on		
<p>PROCESS COMPATIBLE</p>			<p>P.C. BOARD LAYOUT</p>	
MODEL NO.	PLATING	ACTION	RIGHT ANGLE TERMINALS - HORIZONTAL MTG. - WASHABLE MODELS	TRAVEL/THROW; .102 (2.60)
TG36W000050	Gold	on - on	<p>FUNCTION (see page e 20)</p>	
TG39W000050	Gold	on off on		
TG36W010050	Silver	on - on		
TG39W010050	Silver	on off on		
<p>PROCESS COMPATIBLE</p>			<p>P.C. BOARD LAYOUT</p>	

General tolerances for all TG Series drawings - ± .012" (0.3 mm)

TG Series

Microminiature Slide Switches

Additional ordering information: Commonly ordered models are shown on preceding pages with complete model numbers and specifications. Below is an order format that enables you to 'build your own switch' and specify the correct switch model number by simply selecting from all available options shown and filling in the boxes.

'BUILD YOUR OWN SWITCH' ORDER FORMAT

Fill in boxes shown with options selected from below.
Allowable options for each box are shown under each respective box.

Series	Poles	Function	Terms.	Contact & Term. Mat'l.	Actuator	Model
<input type="text" value="T"/> <input type="text" value="G"/>	<input type="text" value="3"/>	<input type="text" value="6"/>	<input type="text" value="P"/> <input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>	<input type="text" value="0"/> <input type="text" value="0"/>
		<input type="text" value="9"/>	<input type="text" value="Y"/> <input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="1"/> <input type="text" value="0"/>	<input type="text" value="5"/> <input type="text" value="0"/>
			<input type="text" value="W"/> <input type="text" value="0"/>	<input type="text" value="3"/>		
			<input type="text" value="M"/> <input type="text" value="W"/>	<input type="text" value="8"/>		
				<input type="text" value="9"/>		

Poles: 3 = Single Pole

Functions: 6 = ON - ON 9 = ON OFF ON

Terminals: P 0 = Straight printed circuit terminals
 Y 0 = Straight printed circuit terminals, bracket mtg.
 W 0 = Right angle printed circuit terminals, horizontal mtg. with bracket
 M W = Wirewrap terminals

Contact & terminal materials: 0 = Brass, gold plated (standard)
 1 = Brass, silver plated
 3 = Brass, gold plated (1.27 microns gold)
 8 = Brass contacts, gold plated and tin plated terminals
 9 = Brass contacts, gold plated (1.27 microns gold) and tin plated terminals

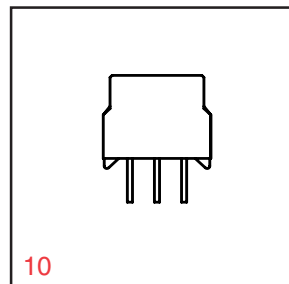
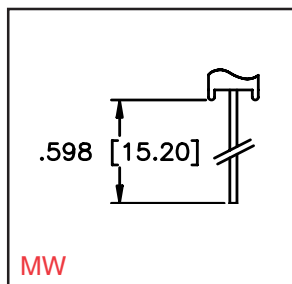
Actuators: 0 0 = High (standard)
 1 0 = Flush

Model: 0 0 = Standard
 5 0 = Washable

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

E

Options MW (wirewrap terminals) and 10 (flush actuator)




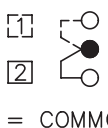
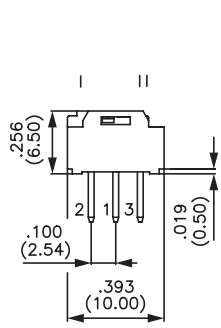
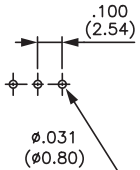
New!
Raised actuator


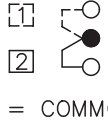
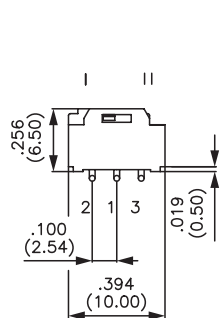
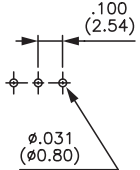
NK Series

Microminiature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

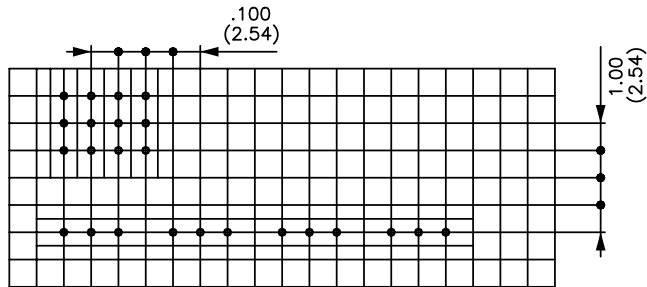
SPECIFICATIONS	FEATURES
<p>Contact rating: 500 mA 12V max. - 1mA 10 mV min.</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 10,000 MΩ min. at 500VDC</p> <p>Dielectric strength: 250 Vrms between terminals 2000 Vrms between adjacent poles placed side by side</p> <p>Electrical life: 2,000 cycles min.</p> <p>Operating temperature range: -40°C to +85°C</p> <p>Solder heat resistance: 250°C max. for 5 seconds</p> <p>Washing not recommended</p>	<ul style="list-style-type: none"> ● Cost effective. ● Flush or raised actuator. ● Wave solderable, flux sealed. ● Through-hole round terminals, straight or right angle. ● Stackable in X & Y directions (with straight terminals).
	MATERIALS
	<p>Contacts & terminals: Gold over nickel plated</p> <p>Case: PBT, glass filled (UL94V-0)</p> <p>Actuator: PBT, glass filled (UL94V-0)</p>

MODEL NO.			
NK236 Flush actuator (shown) NK236H Raised actuator			
 <p>VERTICAL ACTUATOR</p>	<p>1P2T</p>  <p>● = COMMON</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>

MODEL NO.			
NK236W Flush actuator NK236WH Raised actuator (shown)			
 <p>RIGHT ANGLE TERMINALS</p>	<p>1P2T</p>  <p>● = COMMON</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>

EXAMPLE OF PRINTED CIRCUIT BOARD LAYOUT FOR STACKING UNITS

Pitch = .100" (2.54mm)




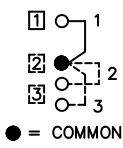
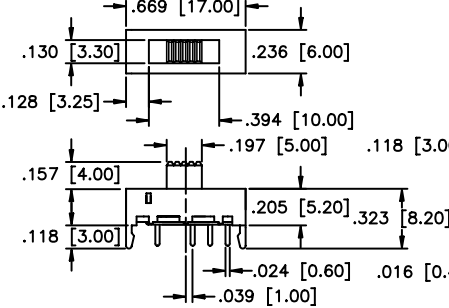
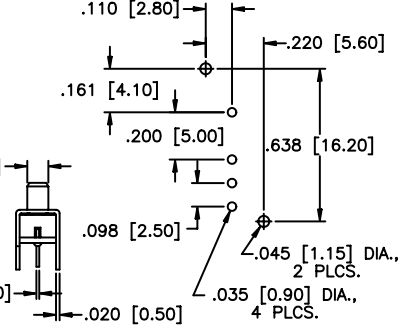

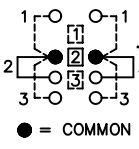
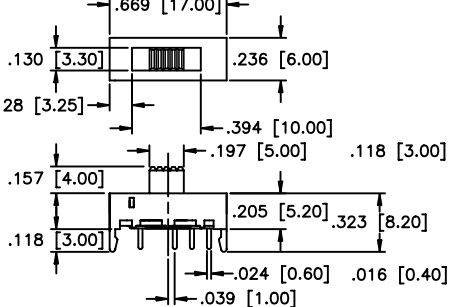
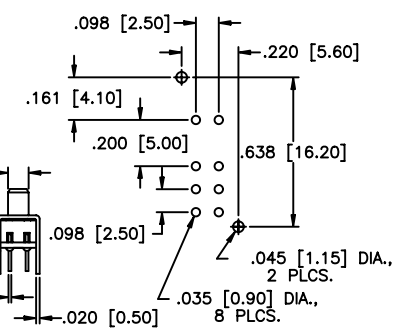
E

MSTS Series

Miniature Slide Switches

SPECIFICATIONS	FEATURES
Contact rating: 300 mA at 28 VDC Initial contact resistance: 20 milliohms max. Insulation resistance: 100 megohms min. at 500 VDC Dielectric strength: 500 VAC for 1 minute Electrical life: 10,000 cycles min. Operating temperature range: -20°C to +85°C Solder heat resistance: 250°C max. for 5 seconds Actuation force: 200-600 grams Solvent washing permissible	<ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Snap-in p.c. mounting bracket design. ● Positive spring loaded ball detent mechanism. ● Epoxy sealed terminals. ● Gold plated contacts available - consult factory.
	MATERIALS
	Contacts & terminals: Silver plated brass Housing: Zinc plated steel Actuator: Polyacetal, color black Base: Phenolic laminated sheet Terminal seal: Epoxy

E

MODEL NO.	.098 (2.50) TRAVEL/THROW		
MSTS1332K	1P3T		
	 <p>● = COMMON</p>		
VERTICAL ACTUATOR	SCHEMATIC	MECHANICAL OUTLINE	P.C. BOARD LAYOUT
MODEL NO.	.098 (2.50) TRAVEL/THROW		
MSTS2332K	2P3T		
	 <p>● = COMMON</p>		
VERTICAL ACTUATOR	SCHEMATIC	MECHANICAL OUTLINE	P.C. BOARD LAYOUT

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


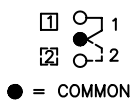
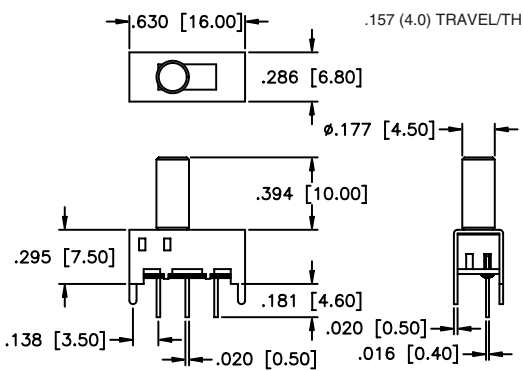
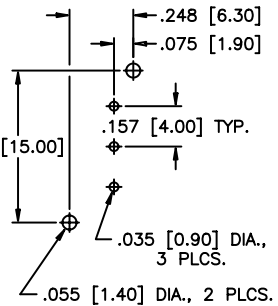

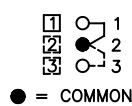
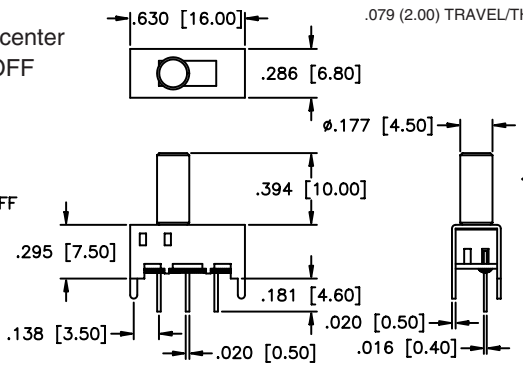
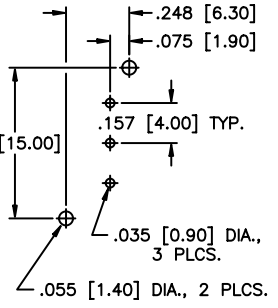

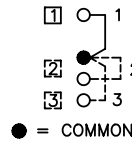
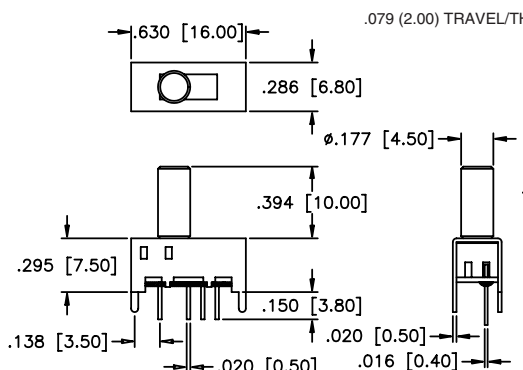
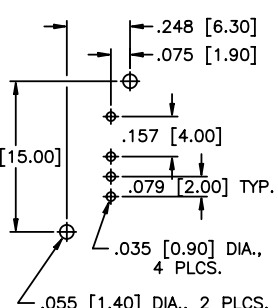
MHS Series

Miniature Slide Switches

with aluminum actuator

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


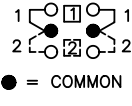
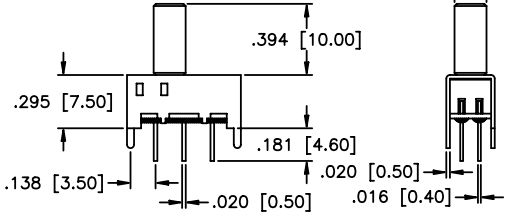
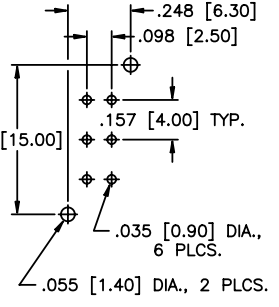

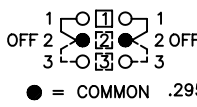
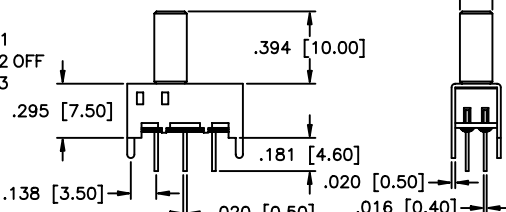
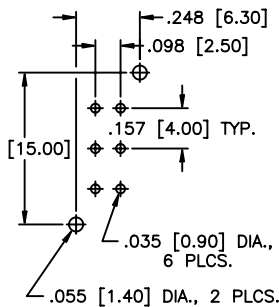

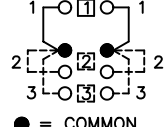
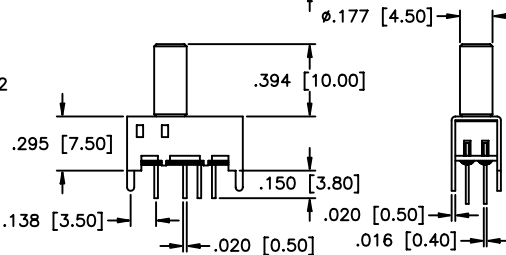
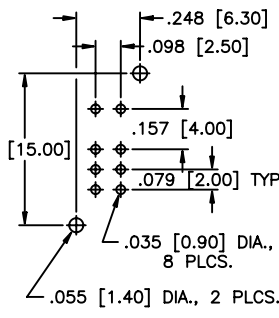
SPECIFICATIONS	FEATURES
<p>Contact rating: 300 mA at 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 VAC for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Actuation force: 250 ±150 grams</p> <p>Solvent washing permissible</p>	<ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Positive spring loaded ball detent mechanism. ● Epoxy sealed terminals.
MATERIALS	
<p>Contacts & terminals: Silver plated brass</p> <p>Housing: Tin plated steel</p> <p>Actuator: Aluminum alloy</p> <p>Base: Phenolic laminated sheet</p>	<p>Terminal seal: Epoxy</p>

MODEL NO.			
MHS122K	1P2T		
 <p>VERTICAL ACTUATOR</p>	 <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>
MHS123K	1P2T w/center OFF		
 <p>VERTICAL ACTUATOR</p>	 <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>
MHS133K	1P3T		
 <p>VERTICAL ACTUATOR</p>	 <p>SCHMATIC</p>	 <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>



MHS Series Miniature Slide Switches

with aluminum actuator

<p>MODEL NO.</p>	.157 (4.00) TRAVEL/THROW		
<p>MHS222K</p>	2P2T		
 <p>VERTICAL ACTUATOR</p>	 <p>● = COMMON</p>	 <p>SCHMATIC</p> <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>
<p>MODEL NO.</p>	.079 (2.0) TRAVEL/THROW		
<p>MHS223K</p>	2P2T w/center OFF		
 <p>VERTICAL ACTUATOR</p>	 <p>● = COMMON</p>	 <p>SCHMATIC</p> <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>
<p>MODEL NO.</p>	.079 (2.0) TRAVEL/THROW		
<p>MHS233K</p>	2P3T		
 <p>VERTICAL ACTUATOR</p>	 <p>● = COMMON</p>	 <p>SCHMATIC</p> <p>MECHANICAL OUTLINE</p>	 <p>P.C. BOARD LAYOUT</p>

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

New!

MHS Series Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS	FEATURES
<p>Contact rating: 300 mA at 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 VAC for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Actuation force: 250 ±150 grams</p> <p>Solvent washing permissible</p>	<ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Positive spring loaded ball detent mechanism. ● Epoxy sealed terminals.
	MATERIALS
	<p>Contacts & terminals: Silver plated brass</p> <p>Housing: Tin plated steel</p> <p>Actuator: Polyacetal</p> <p>Base: Phenolic laminated sheet</p> <p style="text-align: right;">Terminal seal: Epoxy</p>

MODEL NO. MHS122	1P2T		
<p>VERTICAL ACTUATOR</p>	<p>SCHMATIC</p>	<p>MECHANICAL OUTLINE</p>	<p>P.C. BOARD LAYOUT</p>
MODEL NO. MHS123	1P2T w/center OFF		
<p>VERTICAL ACTUATOR</p>	<p>SCHMATIC</p>	<p>MECHANICAL OUTLINE</p>	<p>P.C. BOARD LAYOUT</p>
MODEL NO. MHS133	1P3T		
<p>VERTICAL ACTUATOR</p>	<p>SCHMATIC</p>	<p>MECHANICAL OUTLINE</p>	<p>P.C. BOARD LAYOUT</p>

E