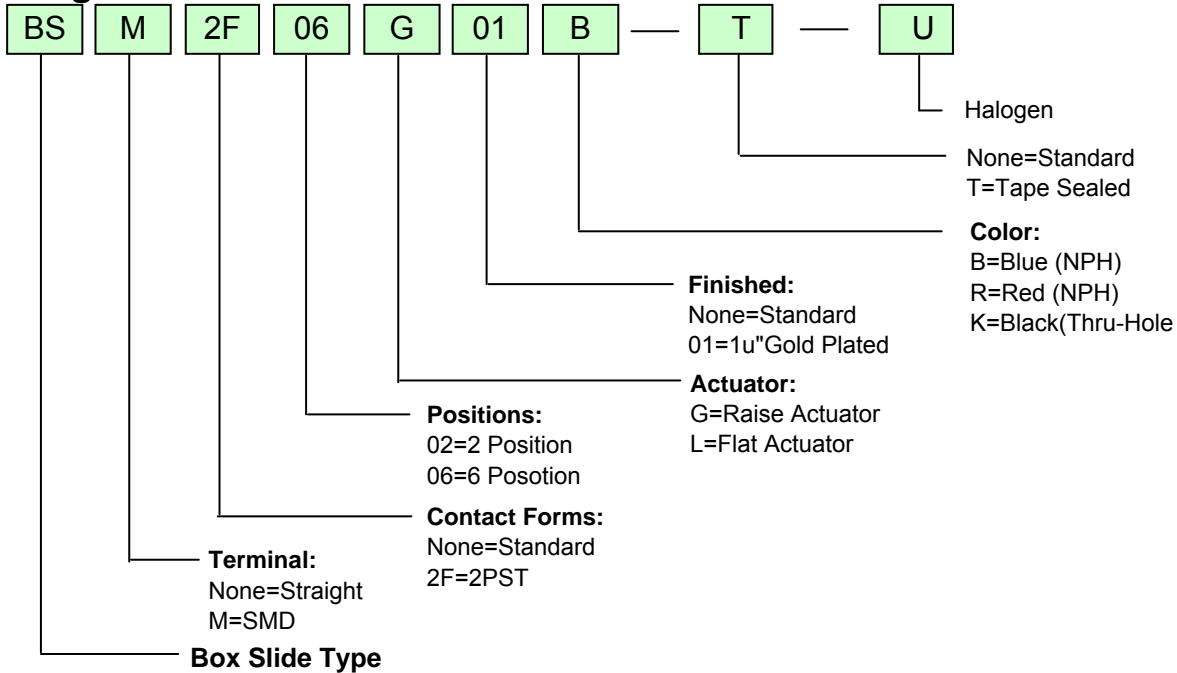


<b>MODEL</b>	<b>SPECIFICATION</b> <b>RoHS Compliant DIP SWITCH</b>	SP-001	Page
BS series Box Slide Type			1/7

### Ordering Information



### Specifications

Contact Rating	Switching.....25mA,24VDC
	Non-Switching.....100mA,50VDC
Contact Resistance	Initial.....50mΩ/Max
	After Reliability Test.....100mΩ/Max
Insulation Resistance	.....100mΩ/Min. at 500 VDC
Dielectric Strength	.....500VDC/ 1 mintue
Operation Force	.....1,000g/max
Travel	.....1.8mm
Mechanical Life	..... <b>5,000 cycles (Min.)</b>
Electrical Life	..... <b>2,000 cycles /25mA,24VDC</b>
Operation Temperature	.....-40 ~ +85
Storage Temperature	.....-40 ~ +85

### Soldering Information

#### Hand Soldering

Soldering iron 30W or under at 350 for 3 sec. max. or at 270 for 5 sec. max.

#### Reflow Soldering:

- (1) Gold-plated series available 2~3 times process
- (2) Tin-plated series available 1 time process
- (3) Vapor Phase Heating (VPH) switch must with Tape sealed type

#### Wave Soldering

- (1) For lead free wave solder simulation of typical components, the solder bath temperature Shall be maintained to 270 / 5~10 seconds.
  - (2) **THR: 280 /10seconds**
- Keep all actuators in "OFF" position during soldering and cleaning process.

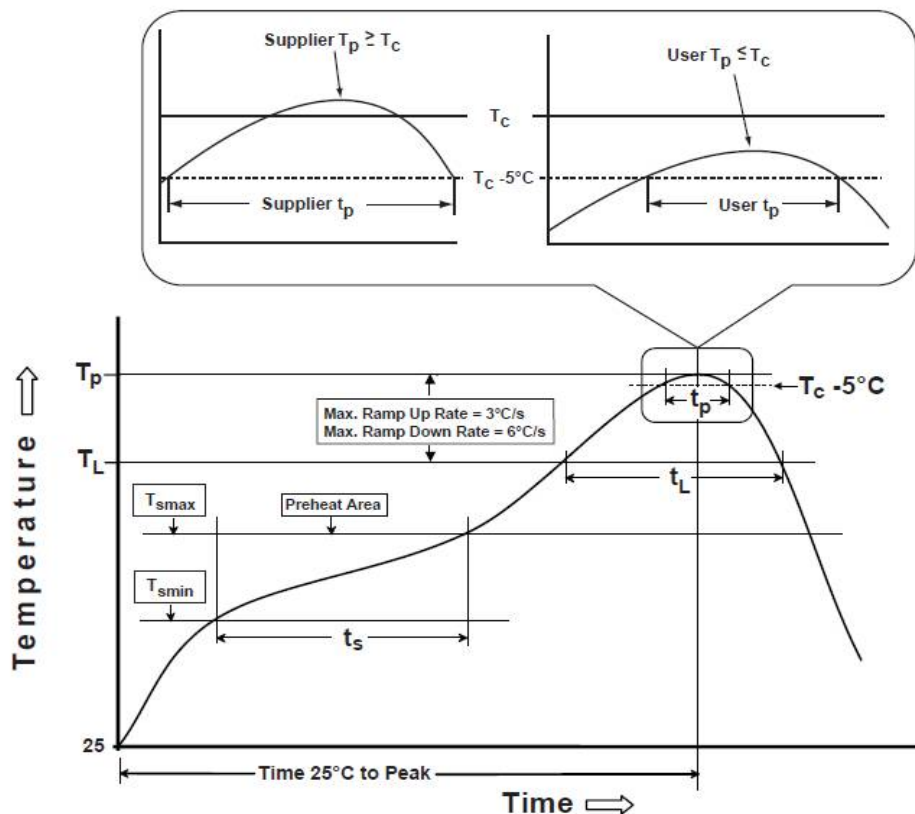
### Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
<b>Preheat / Soak</b>	
Temperature Min ( $T_{smin}$ )	150
Temperature Max ( $T_{smax}$ )	200
Time(ts) from ( $T_{smin}$ to $T_{smax}$ )	60 ~120 seconds
Ramp-up Rate ( $T_L$ to $T_p$ )	3 /second max
Liquidous temperature ( $T_L$ )	217
Time ( $t_L$ ) maintained above to $T_L$	60 ~ 150 seconds
Peak package body temperature ( $T_p$ )	For users $T_p$ must not exceed the Classification temp:250 (Package Thickness>2.5mm) For suppliers $T_p$ must equal or exceed the Classification temp:250 (Package Thickness>2.5mm)
Time ( $t_p$ ) within 5 of specified classification Temperature ( $T_c$ )	30 seconds
Ramp-Down Rate ( $T_p$ to $T_L$ )	6 /second max
Time 25 to Peak Temperature	8 minutes max
* Tolerance for peak profile temperature( $T_p$ ) is defined as a supplier minimum and a user maximum	

**Note 1:** All temperatures refer to topside of the package, measured on the package body surface.

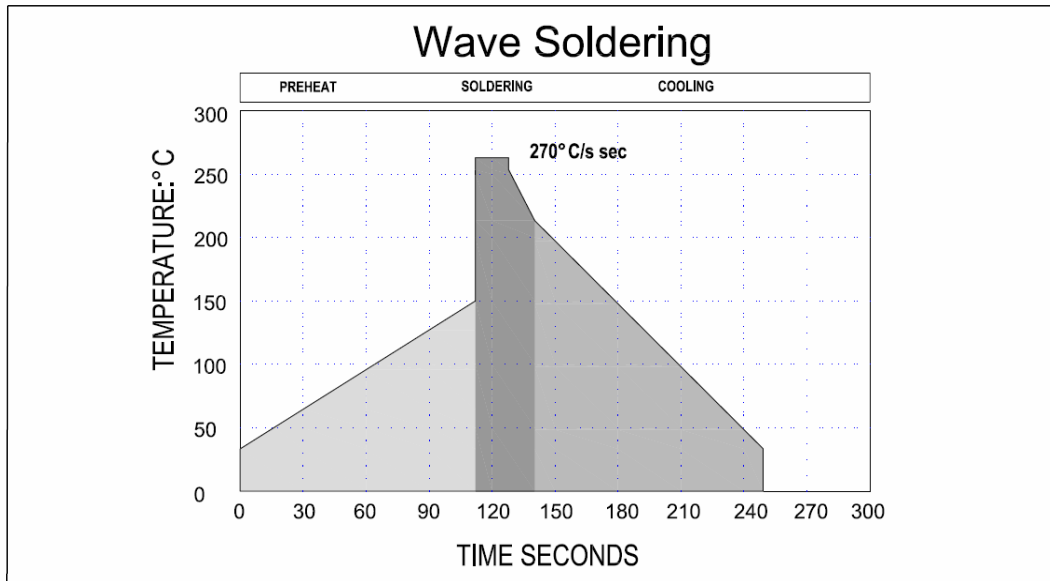
**Note 2:** Time within 5 °C of actual peak temperature ( $t_p$ ) specified for the reflow profiles is a “supplier” minimum and “user” maximum

The table copy from IPC/JEDEC J-STD-020 D.1  
Reflow Soldering Standard Conditions



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BS series Box Slide Type			3/7

### Classification Wave Soldering Profiles



**Maximum dwell time in the solder wave (270 ) shall not exceed 5 seconds.**

#### Switch Operation and Taping

- (1) Use tweezers for operation
- (2) Flux cleaning should be done without removing the Tape.
- (3) If the tape is removed, it adheres less than before when it is placed back on, possibly causing flux inflow
- (4) Do Not Remove Tape sealed before Reflow processing
- (5) Ultrasonic cleaning not re-commended without Tape sealed.

All switches must set in OFF position when through Soldering process.

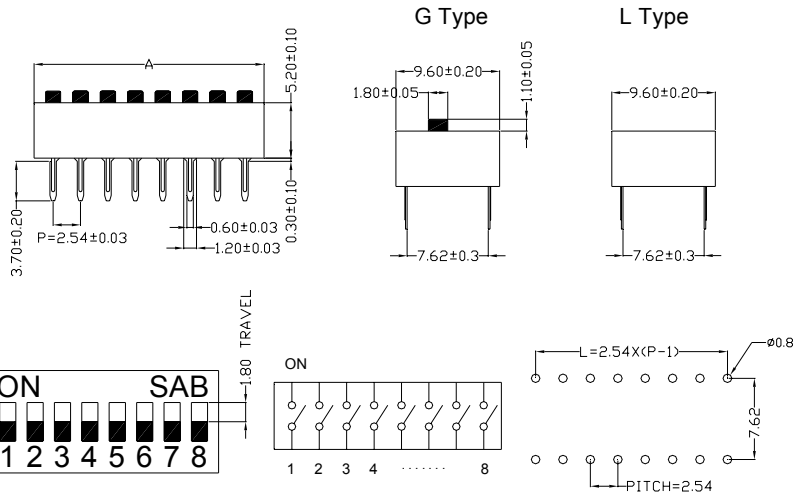
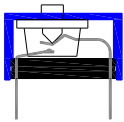
Any flux enters the switch may influence contact function.

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BS series Box Slide Type			4/7

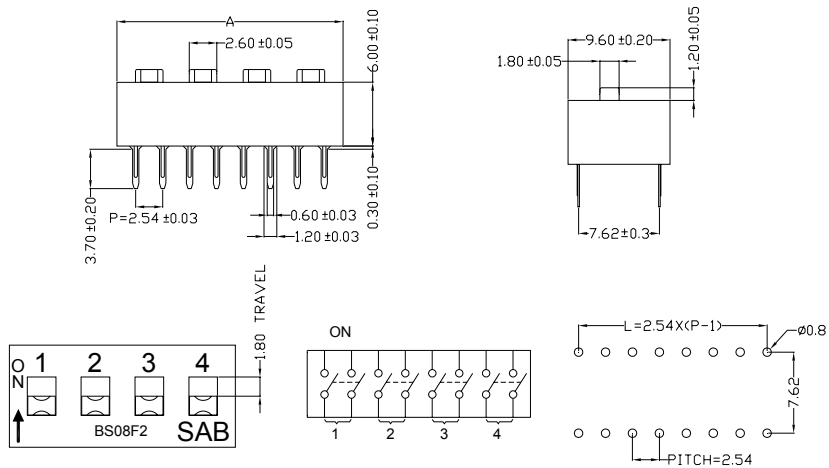
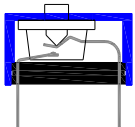
**Materials:**

Cover	BS/BS2F.....Thermoplastic (UL 94V-0), Blue / Red
	BS-K(THR)/BSM.....Thermoplastic (UL 94V-0), Black
Base	BS/BS2F.....Thermoplastic (UL 94V-0), Black
	BS-K(THR)/BSM.....Thermoplastic (UL 94V-0), Black
Actuator	BS/BS2F.....Thermoplastic (UL 94V-0), White
	BS-K(THR)/BSM.....Thermoplastic (UL 94V-0), White
Contact	.....Gold Plated
Terminal	.....40u" +/-10u" Nickel Cover (Pure) Tin-Plated
	.....40u" +/-10u" Nickel Cover 1u" Gold-Plated
Tape	.....Polyester Film

**BS**

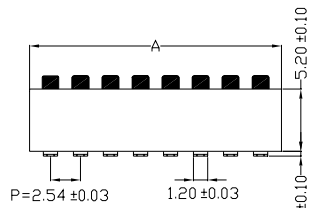
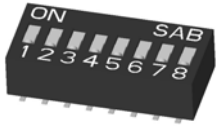


**BS2F**

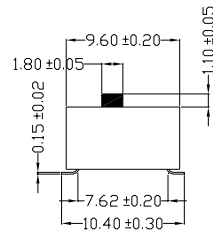


<b>MODEL</b>	<b>SPECIFICATION</b> <b>RoHS Compliant DIP SWITCH</b>	<b>SP-005</b>	<b>Page</b>
BS series Box Slide Type			5/7

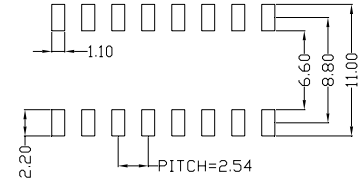
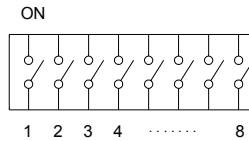
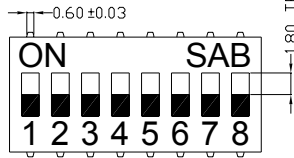
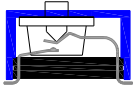
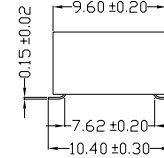
### BSM



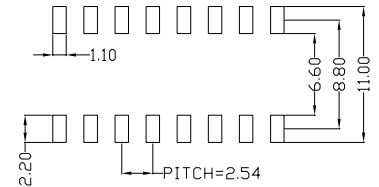
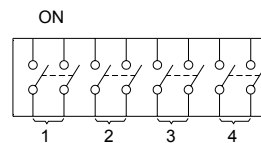
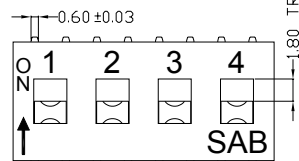
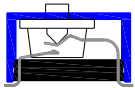
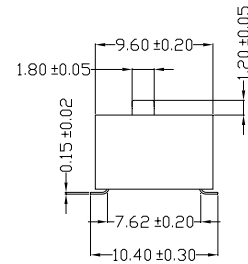
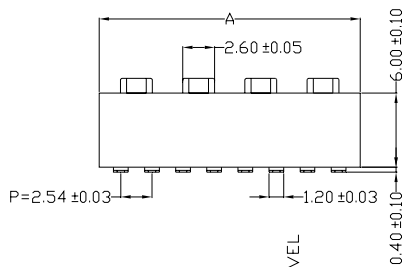
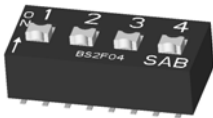
G Type



L Type



### BSM2F



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**Part Number Table:**

**BS/BSM**

No. Pos.	Dim. "A"	Through Hole			SMD		
		Standard Raise Actuator Blue Tube Package	Standard Flat Actuator Red Tube Package	1u" Gold Lead Raise Actuator Black Tube Package	Standard Raise Actuator Black Tube Package	Standard Flat Actuator Black Tube Package	1u" Gold Lead Raise Actuator Black Taping Reel
1	3.54	BS01GB	BS01LR	BS01G01K	BSM01GK	BSM01LK	BSM01G01K-R
2	6.08	BS02GB	BS02LR	BS02G01K	BSM02GK	BSM02LK	BSM02G01K-R
3	8.62	BS03GB	BS03LR	BS03G01K	BSM03GK	BSM03LK	BSM03G01K-R
4	11.16	BS04GB	BS04LR	BS04G01K	BSM04GK	BSM04LK	BSM04G01K-R
5	13.70	BS05GB	BS05LR	BS05G01K	BSM05GK	BSM05LK	BSM05G01K-R
6	16.24	BS06GB	BS06LR	BS06G01K	BSM06GK	BSM06LK	BSM06G01K-R
7	18.78	BS07GB	BS07LR	BS07G01K	BSM07GK	BSM07LK	BSM07G01K-R
8	21.32	BS08GB	BS08LR	BS08G01K	BSM08GK	BSM08LK	BSM08G01K-R
9	23.86	BS09GB	BS09LR	BS09G01K	BSM09GK	BSM09LK	BSM09G01K-R
10	26.40	BS10GB	BS10LR	BS10G01K	BSM10GK	BSM10LK	BSM10G01K-R
12	31.48	BS12GB	BS12LR	BS12G01K	BSM12GK	BSM12LK	BSM12G01K-R

**BS2F/BSM2F**

No. Pos.	Dim. "A"	Through Hole		SMD	
		Raise Actuator Standard Red Tube Package	Raise Actuator 1u" Gold Lead Blue Tube Package	Raise Actuator Standard Black Tube Package	Raise Actuator 1u" Gold Lead Black Tube Package
1	6.08	BS2F01GR	BS2F01G01B	BSM2F01GK	BSM2F01G01K
2	11.16	BS2F02GR	BS2F02G01B	BSM2F02GK	BSM2F02G01K
3	16.24	BS2F03GR	BS2F03G01B	BSM2F03GK	BSM2F03G01K
4	21.32	BS2F04GR	BS2F04G01B	BSM2F04GK	BSM2F04G01K
5	26.40	BS2F05GR	BS2F05G01B	BSM2F05GK	BSM2F05G01K
6	31.48	BS2F06GR	BS2F06G01B	BSM2F06GK	BSM2F06G01K

<b>MODEL</b>	<b>SPECIFICATION</b> <b>RoHS Compliant DIP SWITCH</b>	SP-007	Page
BS series Box Slide Type			7/7

**Tube Package:**

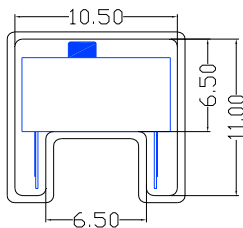
**BS/BSM**

POLE	1	2	3	4	5	6	7	8	9	10	12
TUBE	148	85	61	47	38	32	28	24	22	20	16
BOX	11840	6800	4880	3760	3040	2560	2240	1920	1760	1600	1280
CTN 1	23680	13600	9760	7520	6080	5120	4480	3840	3520	3200	2560
CTN 2	47360	27200	19520	15040	12160	10240	8960	7680	7040	6400	5120

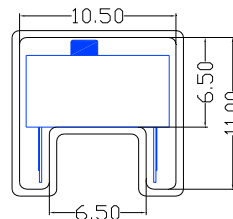
**BS2F/BSM2F**

POLE	1	2	3	4	5	6
TUBE	85	47	32	24	20	16
BOX	6800	3760	2560	1920	1600	1280
CTN 1	13600	7520	5120	3840	3200	2560
CTN 2	27200	15040	10240	7680	6400	5120

**BS/BSM**



**BS2F/BSM2F**



**Box Dimension:**

Tube .....57.0cm × 13.0cm × 12.5cm

**Carton Dimension:**

Tube CTN 1/ 2 Boxes.....58.5cm x 29.0cm x 15.0cm  
 CTN 2/ 4 Boxes.....58.5cm x 28.0cm x 27.0cm  
 Reel CTN 1/ 1 Box.....34.5cm x 34.5cm x 15.0cm  
 CTN 2/ 2 Boxes .....34.0cm x 26.0cm x 35.0cm