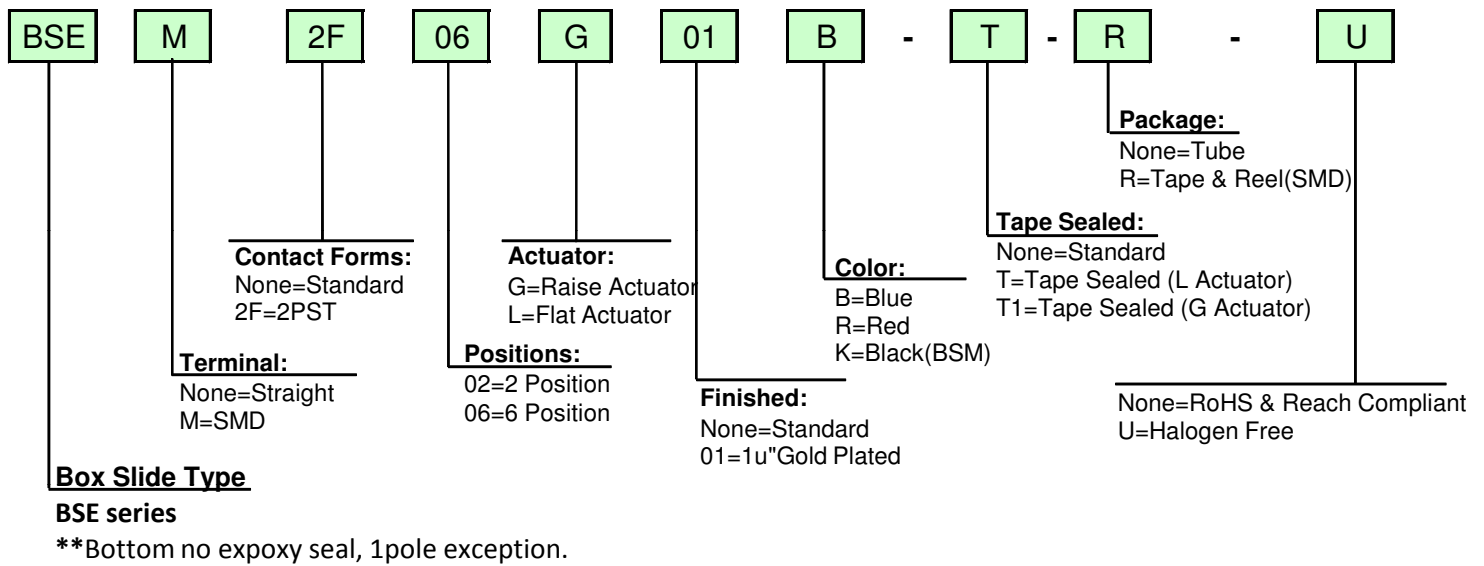


MODEL	SPECIFICATION		Page
BSE/BSEM series Box Slide Type	DIP SWITCH RoHS&REACH Compliant / Halogen Free	SP-001	1/10

Order 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
◆ Operating Force	.....1,000g/max
◆ Travel	.....1.8mm
◆ Mechanical Life	.....5,000 cycles (Min.)
◆ Electrical Life	.....2,000 cycles /25mA,24VDC
◆ Operating Temperature	SMD/THR.....-40°C ~ +105°C
	THT.....-40°C ~ +85°C
◆ Storage Temperature	.....-40°C ~ +85°C

Soldering Information

- ◆ **Hand Soldering**
Soldering iron of 30W or under at 350°C for 3 sec. max. or at 270°C for 5 sec. max.
- ◆ **Reflow Soldering:**
 - (1) BSEM & BSE-THR series allow one-time reflow process only.
 - (2) The peak temperature of the oven for BSEM and BSE-THR series should be 250°C max.
 - (3) For Vapor Phase Heating (VPH) use, the switch must be tape-sealed.
- ◆ **Wave Soldering**
For lead free wave solder simulation of typical components, the solder bath temperature shall be maintained at 270°C max./ 5~10 seconds.
- ◆ **Keep all actuators in "OFF" position during soldering and cleaning processes.**

MODEL	SPECIFICATION		Page
BSE/BSEM series Box Slide Type	DIP SWITCH RoHS&REACH Compliant / Halogen Free	SP-002	2/10

Classification Reflow Profiles

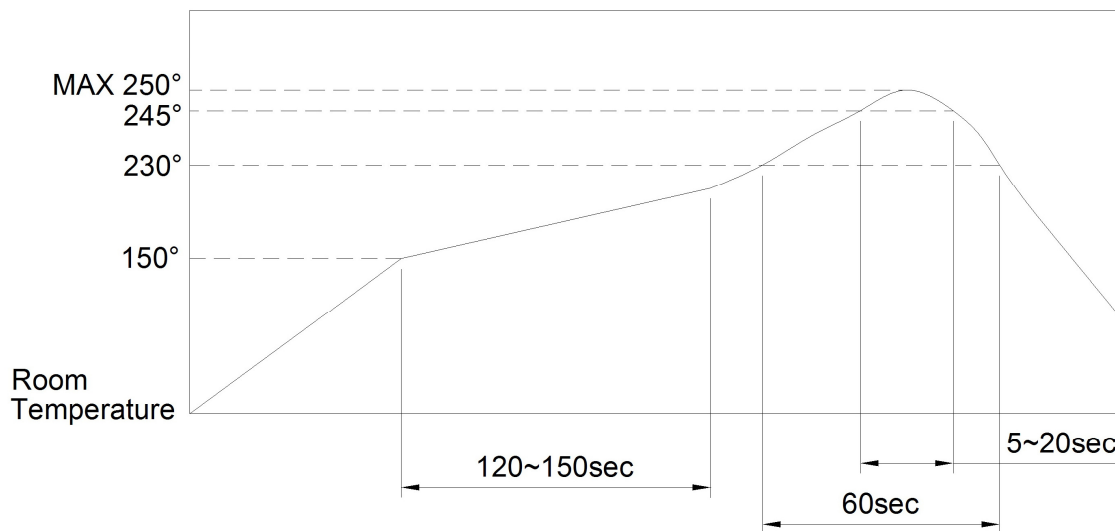
Profile Feature	Pb-Free Assembly
Preheat / Soak	
Temperature Min (T_{Smin})	150°C
Temperature Max (T_{Smax})	200°C
Time(ts) from (T_{Smin} to T_{Smax})	60 ~120 seconds
Ramp-up Rate (T_L to T_p)	3°C/second max
Liquidous temperature (T_L)	217°C
Time (t_L) maintained above to T_L	60 ~ 150 seconds
Peak package body temperature (T_p)	For users T_p must not exceed the Classification temp:250°C (Package Thickness>2.5mm) For suppliers T_p must equal or exceed the Classification temp:250°C (Package Thickness>2.5mm)
Time (t_p) within 5°C of specified classification Temperature (T_c)	30 seconds
Ramp-Down Rate (T_p to T_L)	6°C/second max
Time 25°C 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.

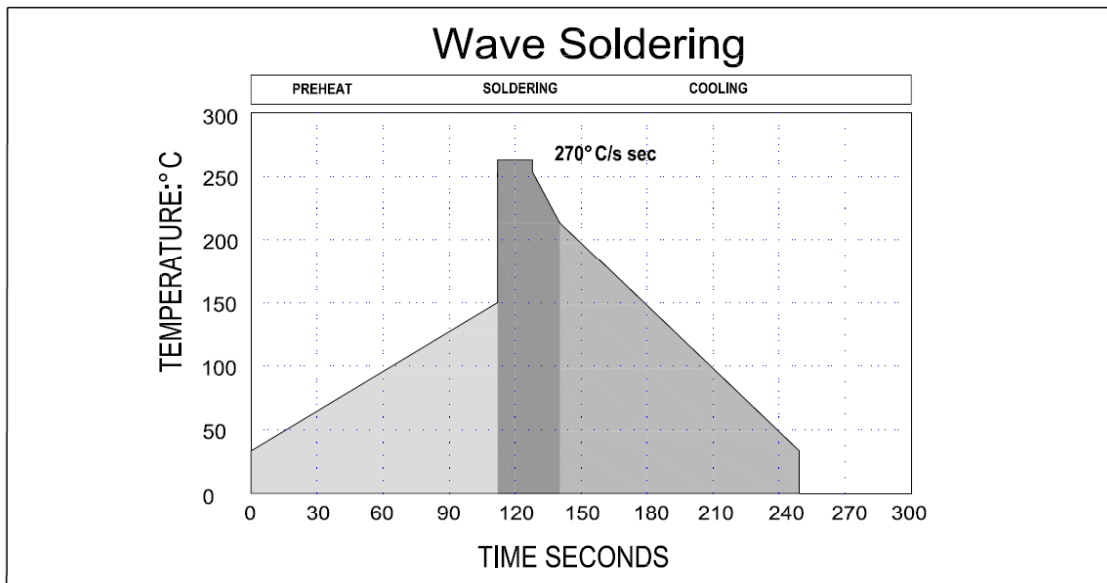
Source: IPC/JEDEC J-STD-020D.1

Recommended Reflow Soldering



MODEL	SPECIFICATION		Page
BSE/BSEM series Box Slide Type	DIP SWITCH RoHS&REACH Compliant / Halogen Free	SP-003	3/10

Recommended Wave Soldering Profiles



Maximum dwell time in the solder wave (270°C) shall not exceed 10 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 recommended without Tape sealed.

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

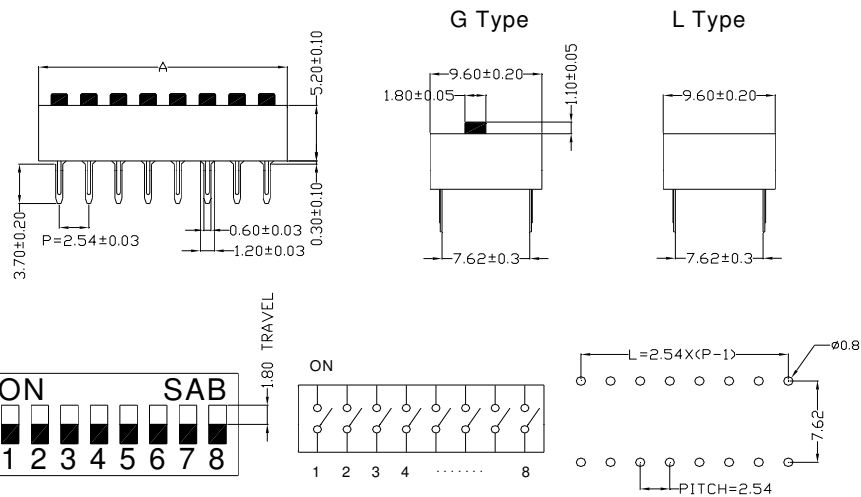
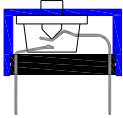
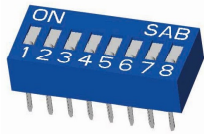
※ Any flux enters the switch may influence contact function.

MODEL	SPECIFICATION		Page
BSE/BSEM series	DIP SWITCH	SP-004	4/10
Box Slide Type	RoHS&REACH Compliant / Halogen Free		

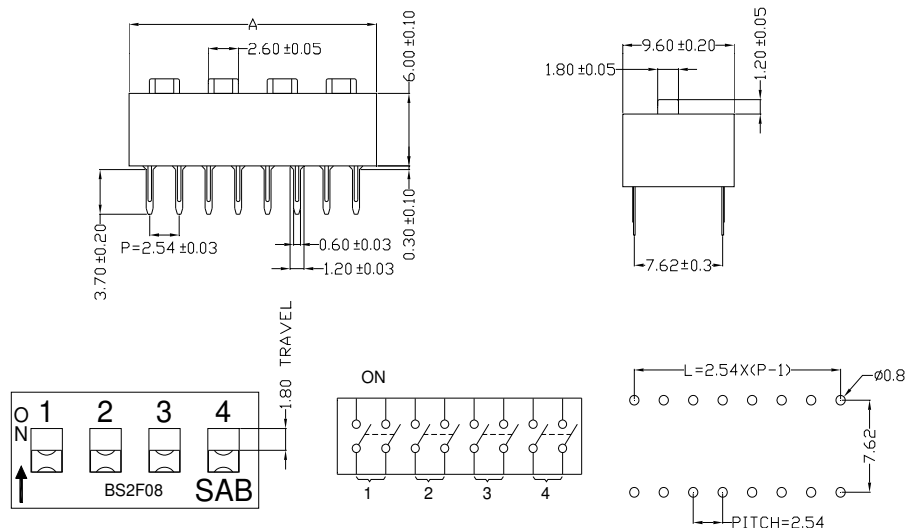
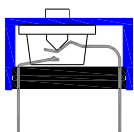
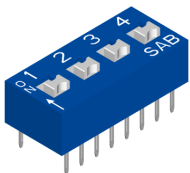
Materials

◆ Cover	RoHS&REACH Compliant... Thermoplastic UL 94V-0, Red/ Blue/ Black(BSEM) Halogen Free..... Thermoplastic UL 94-HB, Red/ Blue Halogen Free..... Thermoplastic UL 94V-0, Black(BSEM)
◆ Base	BSE..... Thermoplastic UL 94-HB, Black BSEM..... Thermoplastic UL 94V-0, Black
◆ Actuator	..... Thermoplastic UL 94-HB, White
◆ Contact	.....40u" +/-10u" Nickel Cover 1u" Gold-Plated
◆ Terminal	Standard.....40u" +/-10u" Nickel Cover (Pure) Tin-Plated 01 type.....40u" +/-10u" Nickel Cover 1u" Gold-Plated
◆ Tape	.....Polyimide Film

BSE

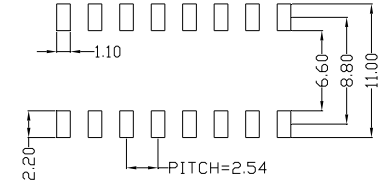
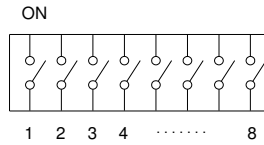
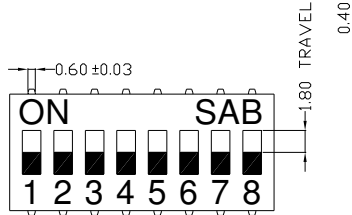
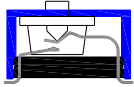
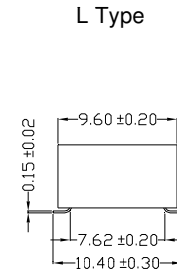
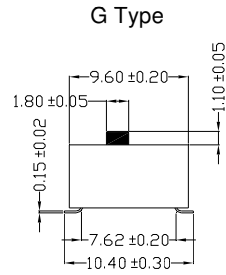
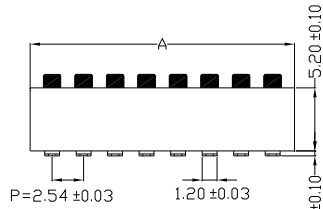
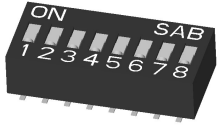


BSE2F

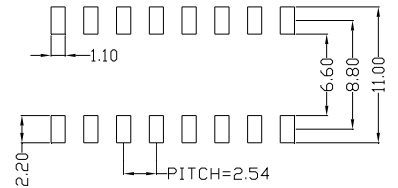
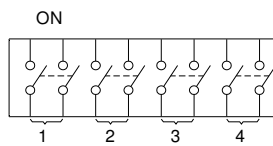
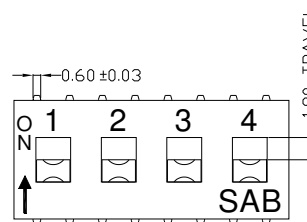
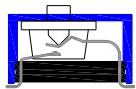
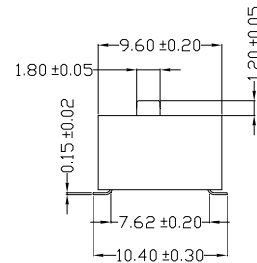
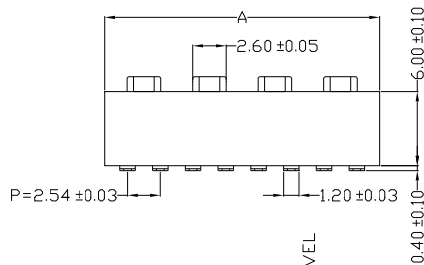
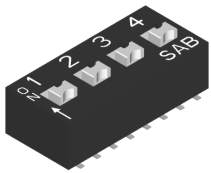


MODEL	SPECIFICATION DIP SWITCH	SP-005	Page
BSE/BSEM series Box Slide Type			RoHS&REACH Compliant / Halogen Free	5/10

BSEM



BSEM2F



MODEL	SPECIFICATION	SP-006	Page
BSE/BSEM series Box Slide Type	DIP SWITCH RoHS&REACH Compliant / Halogen Free		6/10

Part Number Table

BSE / BSEM

No. Pos.	Dim. "A"	Through Hole			SMD		
		Standard Raise Actuator Blue Tube Package	Standard Flat Actuator Red Tube Package	1u" Gold Raise Actuator Black Tube Package	Standard Raise Actuator Black Tube Package	Standard Flat Actuator Black Tube Package	1u" Gold Raise Actuator Black Taping Reel
1	3.54	BSE01GB	BSE01LR	BSE01G01K	BSEM01GK	BSEM01LK	BSEM01G01K-R
2	6.08	BSE02GB	BSE02LR	BSE02G01K	BSEM02GK	BSEM02LK	BSEM02G01K-R
3	8.62	BSE03GB	BSE03LR	BSE03G01K	BSEM03GK	BSEM03LK	BSEM03G01K-R
4	11.16	BSE04GB	BSE04LR	BSE04G01K	BSEM04GK	BSEM04LK	BSEM04G01K-R
5	13.70	BSE05GB	BSE05LR	BSE05G01K	BSEM05GK	BSEM05LK	BSEM05G01K-R
6	16.24	BSE06GB	BSE06LR	BSE06G01K	BSEM06GK	BSEM06LK	BSEM06G01K-R
7	18.78	BSE07GB	BSE07LR	BSE07G01K	BSEM07GK	BSEM07LK	BSEM07G01K-R
8	21.32	BSE08GB	BSE08LR	BSE08G01K	BSEM08GK	BSEM08LK	BSEM08G01K-R
9	23.86	BSE09GB	BSE09LR	BSE09G01K	BSEM09GK	BSEM09LK	BSEM09G01K-R
10	26.40	BSE10GB	BSE10LR	BSE10G01K	BSEM10GK	BSEM10LK	BSEM10G01K-R
12	31.48	BSE12GB	BSE12LR	BSE12G01K	BSEM12GK	BSEM12LK	BSEM12G01K-R

BSE2F/BSEM2F

No. Pos.	Dim. "A"	Through Hole		SMD	
		BSE2F Raise Actuator Standard Red Tube Package	BSE2F Raise Actuator 1u" Gold Lead Blue Tube Package	BSEM2F Raise Actuator Standard Black Tube Package	BSEM2F Raise Actuator 1u" Gold Lead Black Tube Package
1	6.08	BSE2F01GR	BSE2F01G01B	BSEM2F01GK	BSEM2F01G01K
2	11.16	BSE2F02GR	BSE2F02G01B	BSEM2F02GK	BSEM2F02G01K
3	16.24	BSE2F03GR	BSE2F03G01B	BSEM2F03GK	BSEM2F03G01K
4	21.32	BSE2F04GR	BSE2F04G01B	BSEM2F04GK	BSEM2F04G01K
5	26.40	BSE2F05GR	BSE2F05G01B	BSEM2F05GK	BSEM2F05G01K
6	31.48	BSE2F06GR	BSE2F06G01B	BSEM2F06GK	BSEM2F06G01K

MODEL	SPECIFICATION DIP SWITCH RoHS&REACH Compliant / Halogen Free	SP-007	Page
BSE/BSEM series Box Slide Type			7/10

Tube Package

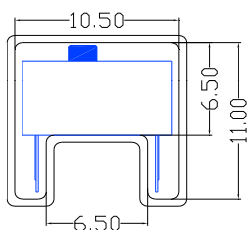
◆ BSE/BSEM

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

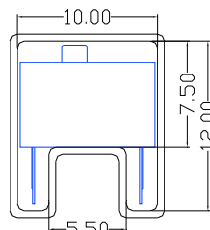
◆ BSE2F/BSEM2F

POLE	1	2	3	4	5	6
TUBE	85	47	32	24	20	16
BOX	4760	2632	1792	1344	1120	896
CTN 1	9520	5264	3584	2688	2240	1792
CTN 2	19040	10528	7168	5376	4480	3584

BSE/BSEM



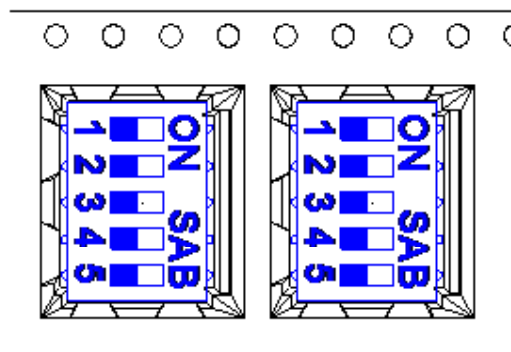
BSE2F/BSEM2F



Tape & Reel package

◆ BSEM

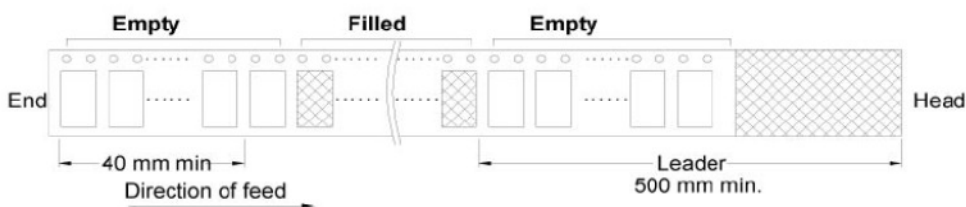
POLE	02	03	04	05	06	07	08	10	12
Pitch (mm)	12	16	16	16	16	16	16	16	16
Width (mm)	24	24	24	24	24	44	44	44	44
Per Reel	700	500	500	500	500	500	500	500	500



MODEL	SPECIFICATION DIP SWITCH RoHS&REACH Compliant / Halogen Free	SP-008	Page
BSE/BSEM series Box Slide Type			8/10

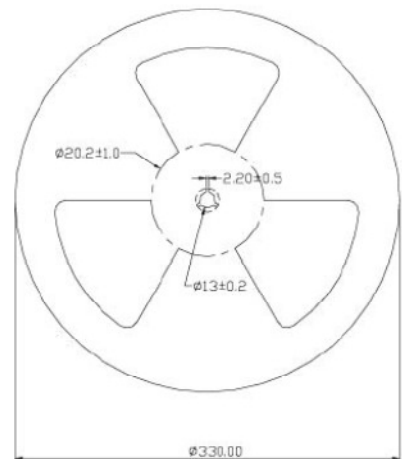
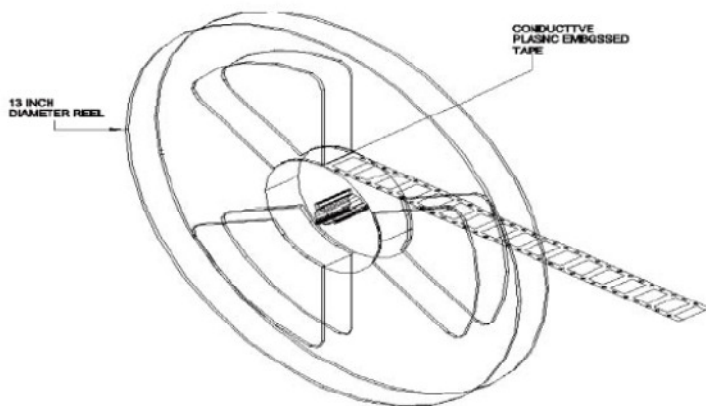
Carry Tape Table

P/N	Pitch(mm)	Thickness(mm)	Width(mm)	Sellota[e(mm)	@REEL/BOX	Q'ty/Reel
BSEM02	12	0.4	24	21.3	4	700
BSEM03	16	0.4	24	21.3		500
BSEM04	16	0.4	24	21.3		500
BSEM05	16	0.4	24	21.3		500
BSEM06	16	0.4	32	25.5	3	500
BSEM08	16	0.4	44	37.5	2	500
BSEM10	16	0.4	44	37.5		500
BSEM12	16	0.4	44	37.5		500



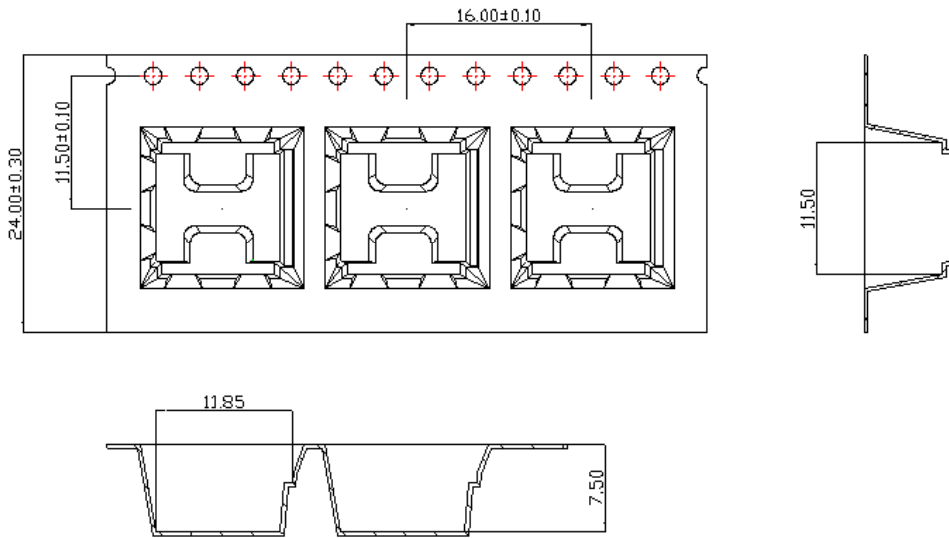
TAPE AND REEL PACKAGING

Meet EIA 481-2D & EIA 481-3

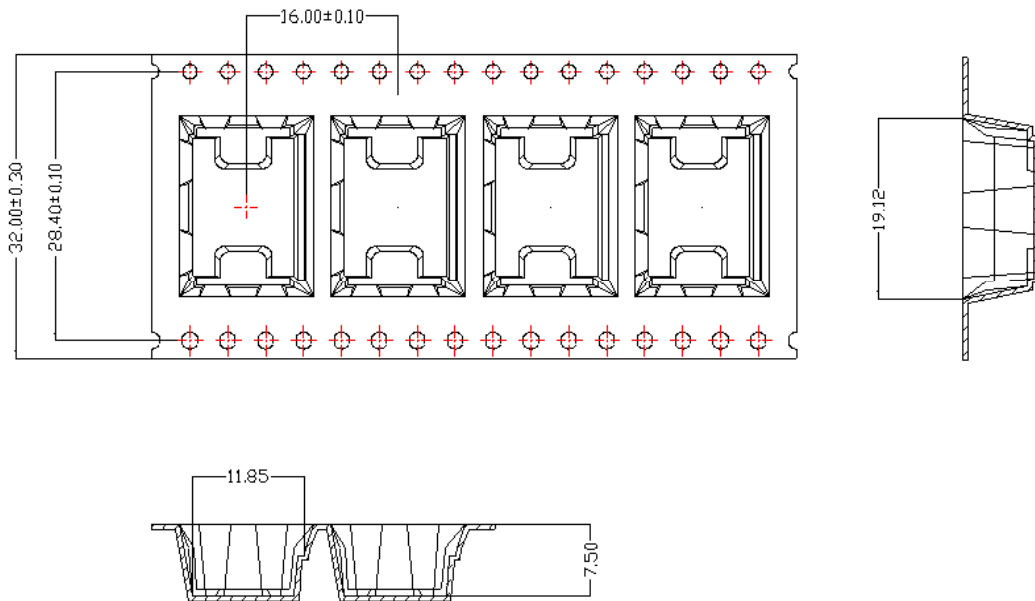


MODEL	SPECIFICATION DIP SWITCH RoHS&REACH Compliant / Halogen Free	SP-009	Page
BSE/BSEM series Box Slide Type			9/10

24mm

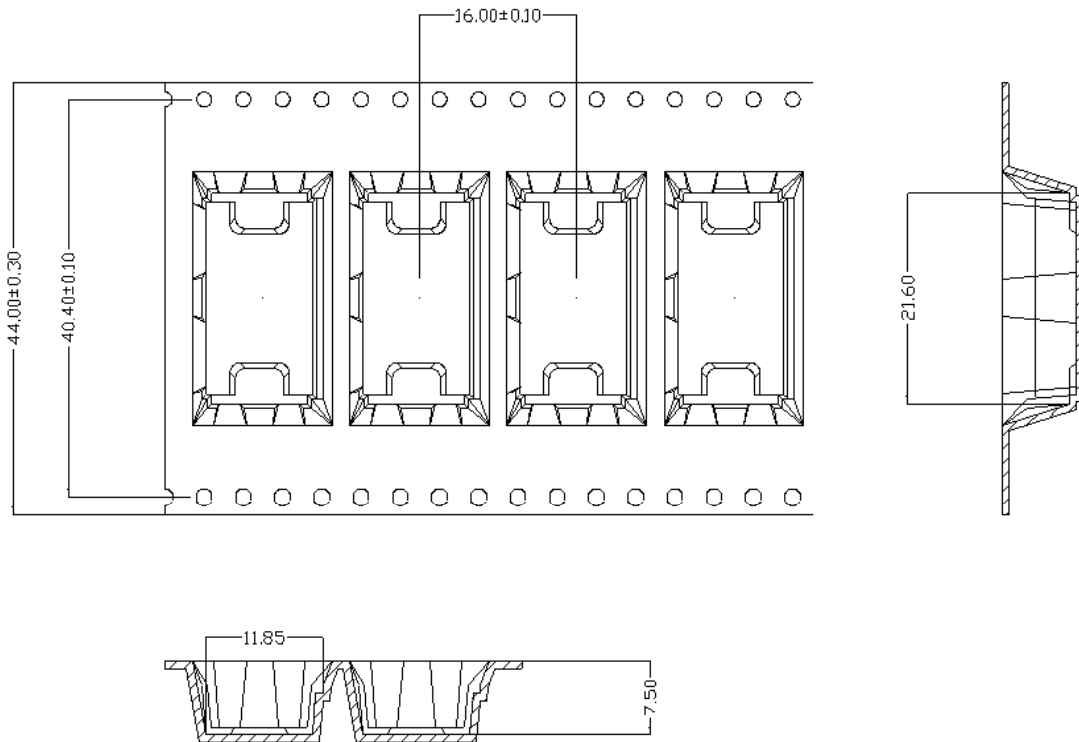


32mm



MODEL	SPECIFICATION DIP SWITCH RoHS&REACH Compliant / Halogen Free	SP-010	Page
BSE/BSEM series Box Slide Type			10/10

44mm



Box Dimension

- ◆ Tube 57.0cm x 13.0cm x 12.5cm
- ◆ Tape & Reel 34.5cm x 34.5cm x 15.0cm

Carton Dimension

- ◆ Tube
 - 2 Boxes..... 58.5cm x 29.0cm x 15.0cm
 - 4 Boxes..... 58.5cm x 28.0cm x 27.0cm
- ◆ Tape & Reel
 - 1 Box..... 34.5cm x 34.5cm x 15.0cm
 - 2 Boxes..... 36.0cm x 27.5cm x 37.0cm