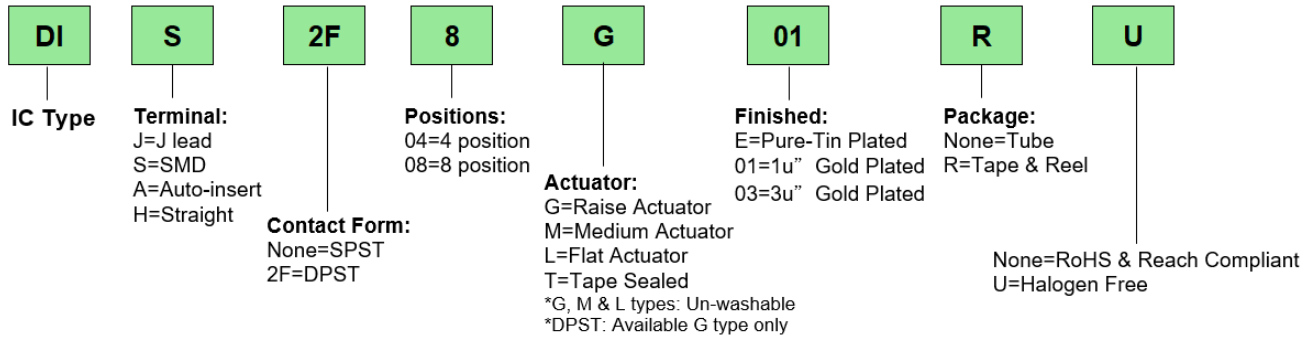


MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-001	Page
DI series			1/11
IC Type			

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 500VDC
◆ Dielectric Strength	.....500VAC/ 1 minute
◆ Operating Force	.....1,000g max
◆ Travel	.....0.9mm
◆ Mechanical Life	.....5,000 cycles (Min.)
◆ Electrical Life	.....2,000 cycles/ 25mA, 24VDC
◆ Operating Temperature	.....-40°C ~ +105°C
◆ Storage Temperature	.....-40°C ~ +85°C

Recommended 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**
Peak temperature: 245 or 250°C max. The time above 240 or 245°C must be 30 sec. max.
(1) Gold-plated types allow 2~3-time reflow process.
(2) Tin-plated types allow 1-time reflow process only.
(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 260°C±5°C for 10 sec. max.
- ◆ **Keep all actuators in "OFF" position during soldering and cleaning processes.**
- ◆ **As the natural characteristic of white plastic, actuators shall become ivory color after soldering.**

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Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Preheat / Soak	
Temperature Min ($T_{s_{min}}$)	150°C
Temperature Max ($T_{s_{max}}$)	200°C
Time(ts) from ($T_{s_{min}}$ to $T_{s_{max}}$)	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: 245 or 250°C(Package Thickness:>2.5mm) Reference Table 4-2 For suppliers T_p must equal or exceed the Classification temp: 245 or 250°C(Package Thickness:>2.5mm) Reference Table 4-2
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.

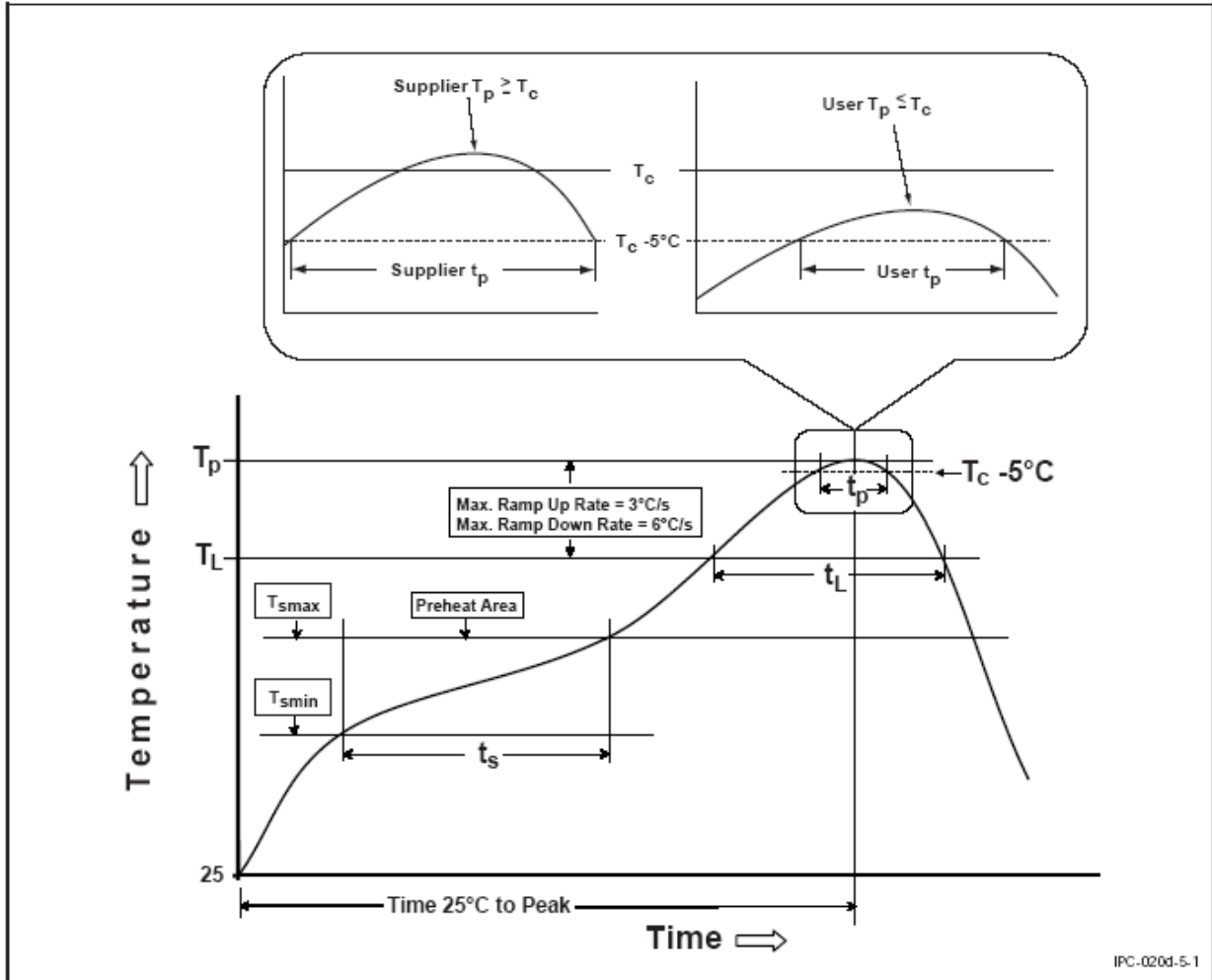
Note 2: Time within 5°C of actual peak temperature (t_p) specified for the reflow profiles is a “supplier” minimum and “user” maximum.

Table 4-2 Pb-Free Process - Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ 350 - 2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-003	Page
DI series			3/11
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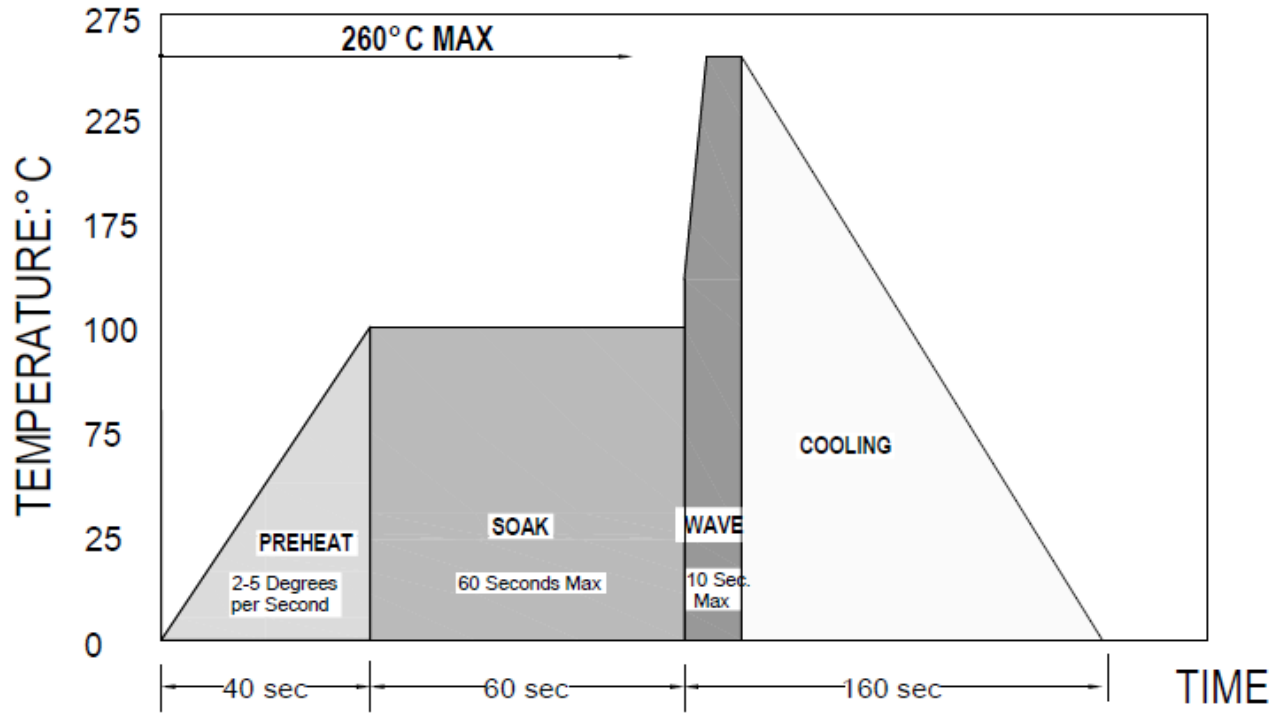
Recommended Reflow Soldering Conditions



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

MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-004	Page
DI series			4/11
IC Type			

Recommended Wave Soldering Profiles



Maximum dwell time in the solder wave (260°C) shall not exceed 10 seconds.

Switch Operation and Taping

- (1) Use tweezers or ball-point pen 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 DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-005	Page
DI series			5/11
IC Type			

Materials

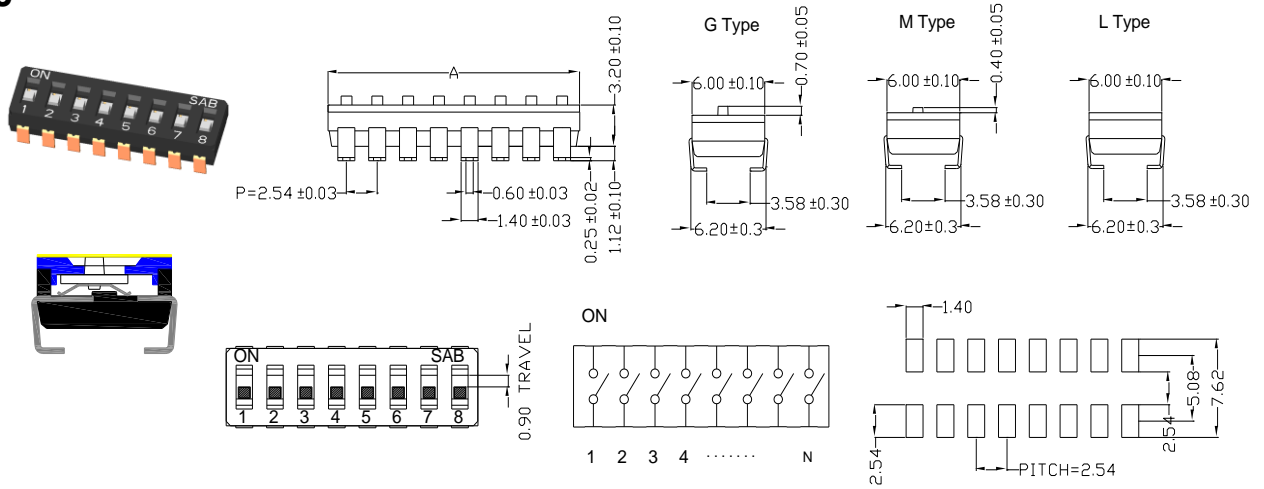
◆ Cover	RoHS&REACH Compliant.....Thermoplastic UL 94-V0, Black Halogen Free.....Thermoplastic UL 94-V0, Black
◆ Base	RoHS&REACH Compliant.....Thermoplastic UL 94V0, Black Halogen Free.....Thermoplastic UL 94V0, Black
◆ Actuator	.....Thermoplastic UL 94-HB, White
◆ Movable Contact	E type.....Cooper Alloy, Tin-Plated over Nickel 01 type.....Cooper Alloy, 1u" Gold-Plated over Nickel 03 type.....Cooper Alloy, 3u" Gold-Plated over Nickel
◆ Terminal Contact	E type.....Cooper Alloy, Tin-Plated over Nickel 01 type.....Cooper Alloy, 1u" Gold-Plated over Nickel 03 type.....Cooper Alloy, 3u" Gold-Plated over Nickel
◆ Terminal	E type.....Cooper Alloy, Tin-Plated over Nickel 01 type.....Cooper Alloy, 1u" Gold-Plated over Nickel 03 type.....Cooper Alloy, 3u" Gold-Plated over Nickel
◆ Tape	.....Polyimide Film

Part Number Table

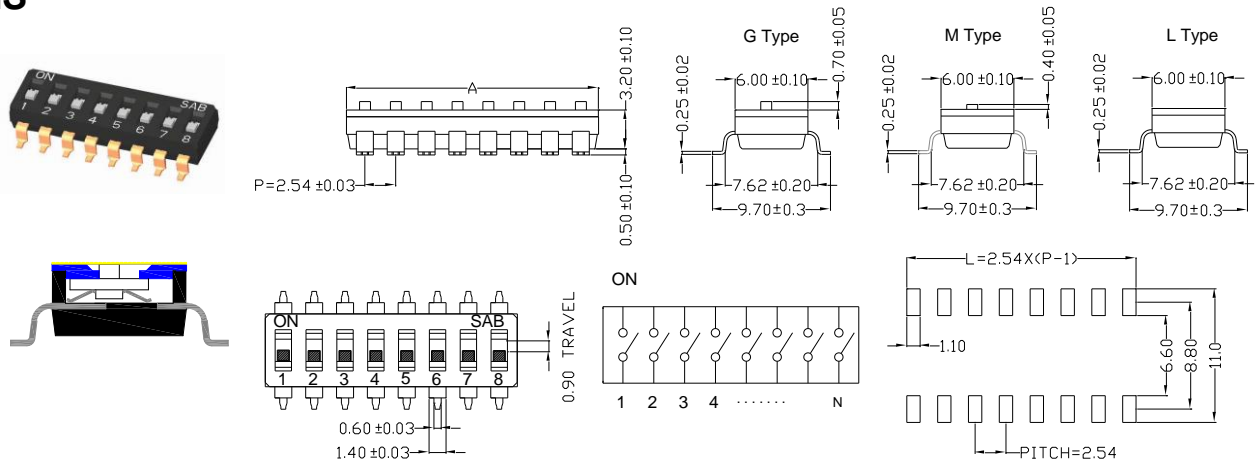
No. Pos.	Dim. "A"	Auto Insert Pure-Tin Lead Raise Actuator Tube Package	SMD 1u" Gold Lead Flat Actuator Tube Package	J Lead 3u" Gold Lead Tape Sealed Tape Reel
1	2.98	DIA01GE	DIS01L01	DIJ01T03-R
2	5.52	DIA02GE	DIS02L01	DIJ02T03-R
3	8.06	DIA03GE	DIS03L01	DIJ03T03-R
4	10.60	DIA04GE	DIS04L01	DIJ04T03-R
5	13.14	DIA05GE	DIS05L01	DIJ05T03-R
6	15.68	DIA06GE	DIS06L01	DIJ06T03-R
7	18.22	DIA07GE	DIS07L01	DIJ07T03-R
8	20.76	DIA08GE	DIS08L01	DIJ08T03-R
9	23.30	DIA09GE	DIS09L01	DIJ09T03-R
10	25.84	DIA10GE	DIS10L01	DIJ10T03-R
12	30.92	DIA12GE	DIS12L01	DIJ12T03-R

MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-006	Page
DI series			6/11
IC Type			

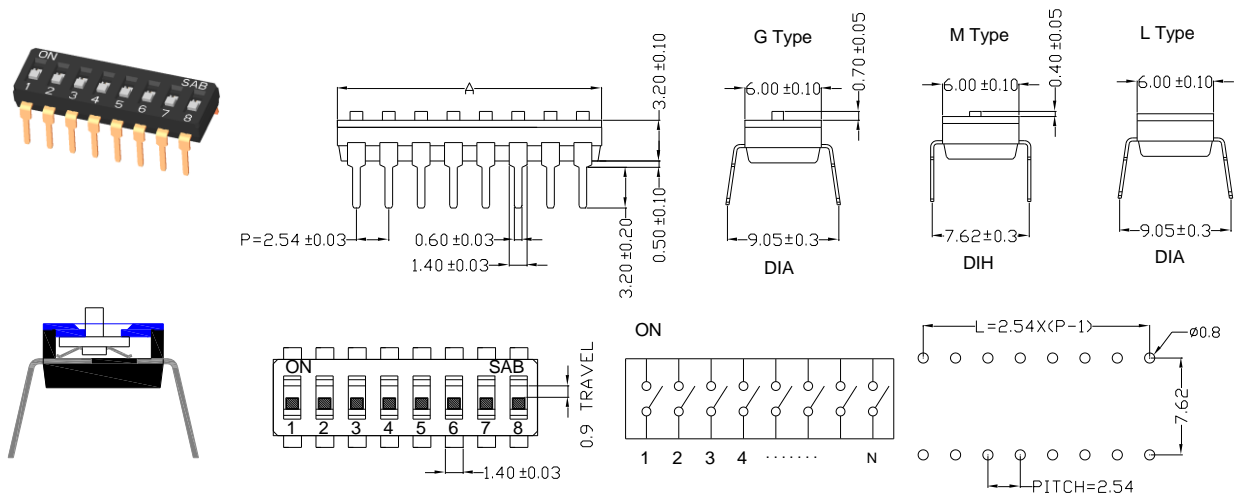
DIJ



DIS

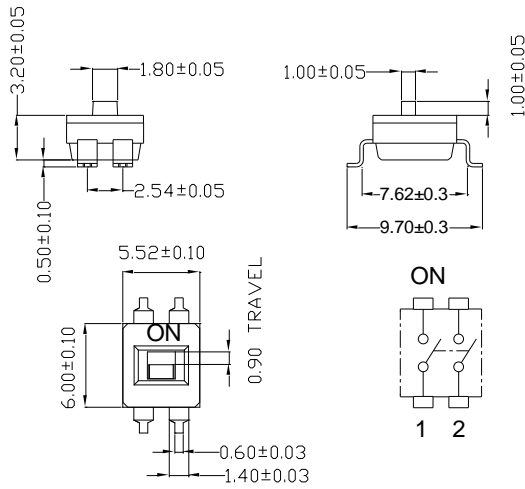
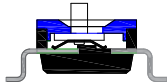
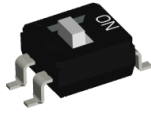


DIA/H



MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-007	Page
DI series			7/11
IC Type			

DIS2F

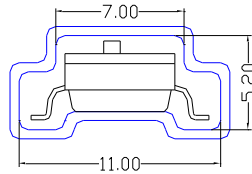


MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-008	Page
DI series			8/11
IC Type			

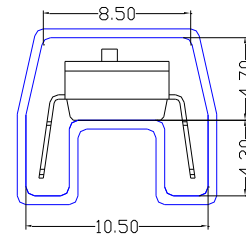
Tube Package

POLE	1	2	3	4	5	6	7	8	9	10	12
TUBE	174	95	65	48	39	33	28	25	22	20	17
BOX	17400	9500	6500	4800	3900	3300	2800	2500	2200	2000	1700
CTN 1	34800	19000	13000	9600	7800	6600	5600	5000	4400	4000	3400
CTN 2	69600	38000	26000	19200	15600	13200	11200	10000	8800	8000	6800

DIS



DIA/H



Tape & Reel package

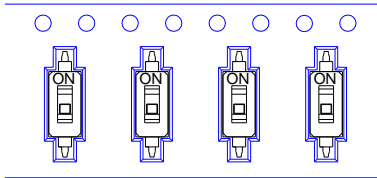
◆ **DIS**

POLE	01	02	03	04	05	06	07	08	09	10	12
Pitch (mm)	8	8	16	16	16	16	16	16	16	16	16
Width (mm)	16	16	16	24	24	24	32	32	44	44	44
G&M type / Reel	1500	1500	800	800	800	800	800	800	800	800	800
L type / Reel	2000	2000	1000	1000	1000	1000	1000	1000	1000	1000	1000

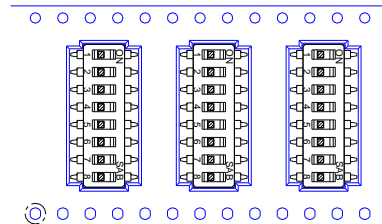
◆ **DIJ**

POLE	01	02	03	04	05	06	07	08	09	10	12
Pitch (mm)	8	12	12	12	12	12	12	12	12	12	12
Width (mm)	16	16	16	24	24	24	32	32	44	44	44
G&M type / Reel	1500	900	900	900	900	900	900	900	900	900	900
L type / Reel	1600	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100

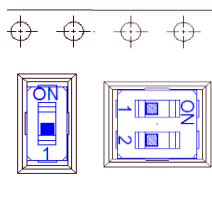
DIS01/DIS02



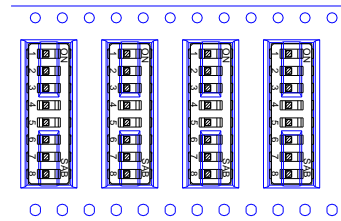
DIS03-12



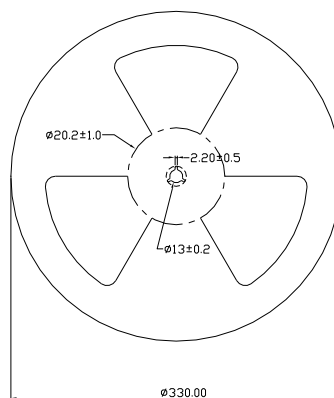
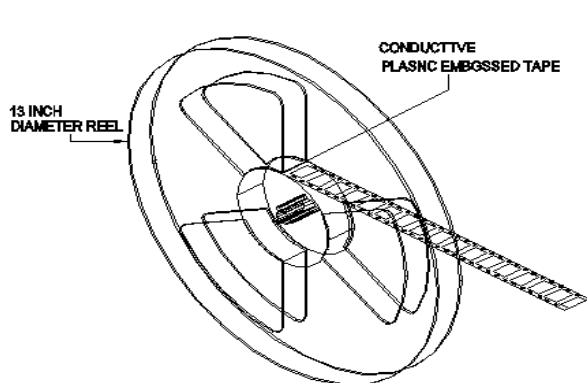
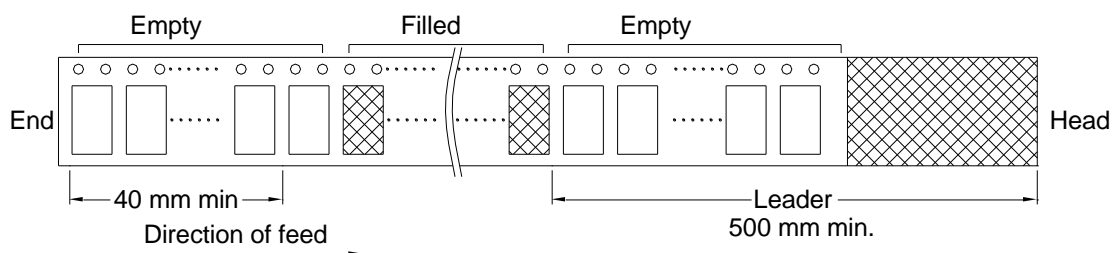
DIJ01/DIJ02



DIJ03-12



MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-009	Page
DI series			9/11
IC Type			

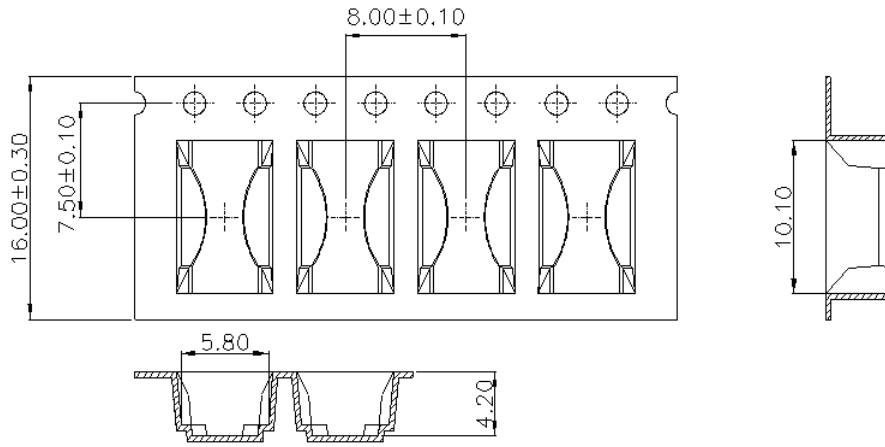


Carry Tape Table:

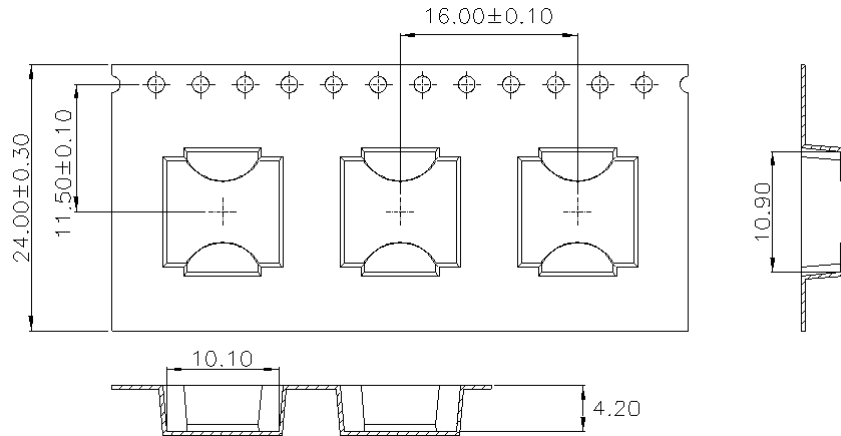
P/N	Pitch(mm)	Thickness(mm)	Width(mm)	Sellotape(mm)	@REEL/BOX	Q'ty/Reel
DIS01	8	0.35	16	13.3	6	1500(G&M)/2000(L)
DIS02	8	0.35	16	13.3		1500(G&M)/2000(L)
DIS03	16	0.35	16	13.3		800(G&M)/1000(L)
DIS04	16	0.35	24	21.3	4	800(G&M)/1000(L)
DIS05	16	0.35	24	21.3		800(G&M)/1000(L)
DIS06	16	0.35	24	21.3		800(G&M)/1000(L)
DIS07	16	0.35	32	25.5	3	800(G&M)/1000(L)
DIS08	16	0.35	32	25.5		800(G&M)/1000(L)
DIS09	16	0.4	44	37.5	2	800(G&M)/1000(L)
DIS10	16	0.4	44	37.5		800(G&M)/1000(L)
DIS12	16	0.4	44	37.5		800(G&M)/1000(L)

MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-0010	Page
DI series			10/11
IC Type			

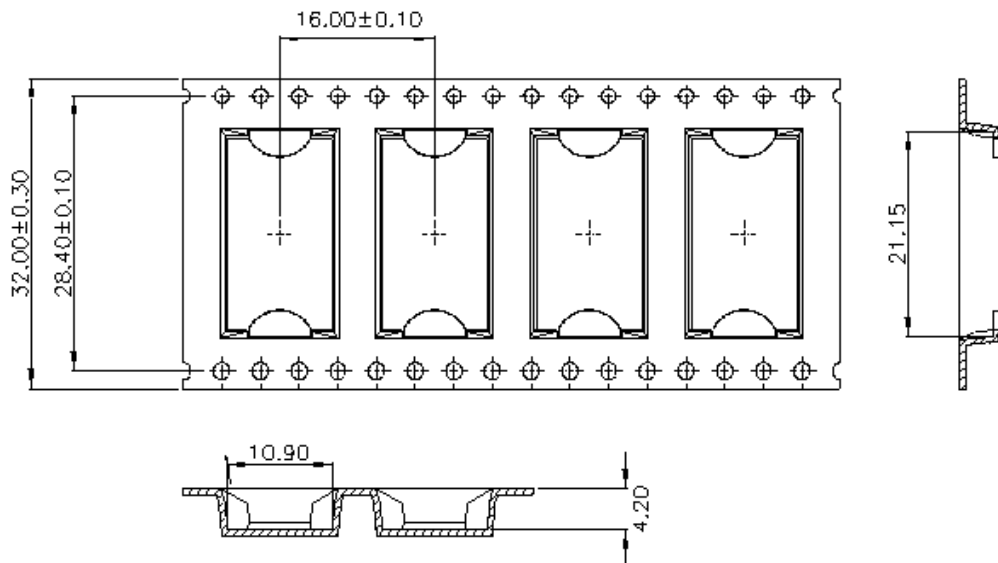
16mm



24mm

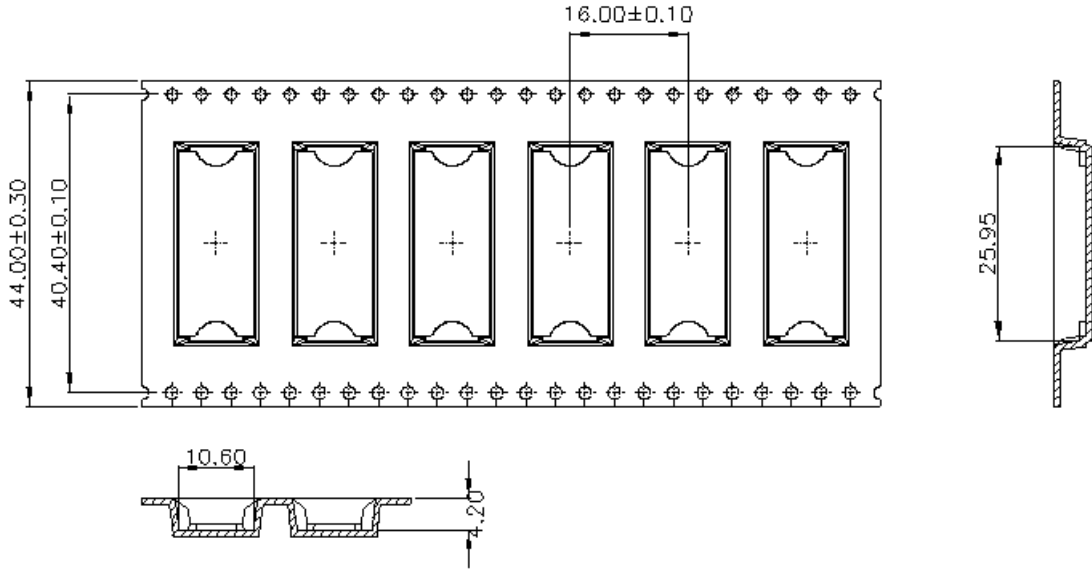


32mm



MODEL	SPECIFICATION DIP SWITCH RoHS & REACH Compliant / Halogen Free	SP-0011	Page
DI series			11/11
IC Type			

44mm



Box Dimension

- ◆ Tube 56.5cm x 12.8cm x 12.3cm
- ◆ Tape & Reel 34.2cm x 34.2cm x 14.0cm

Carton Dimension

- ◆ Tube
 - 2 Boxes..... 58.0cm x 28.0cm x 14.5cm
 - 4 Boxes..... 58.0cm x 28.0cm x 26.0cm
- ◆ Tape & Reel
 - 1 Box..... 34.2cm x 34.2cm x 14.0cm
 - 2 Boxes..... 36.0cm x 27.5cm x 37.0cm