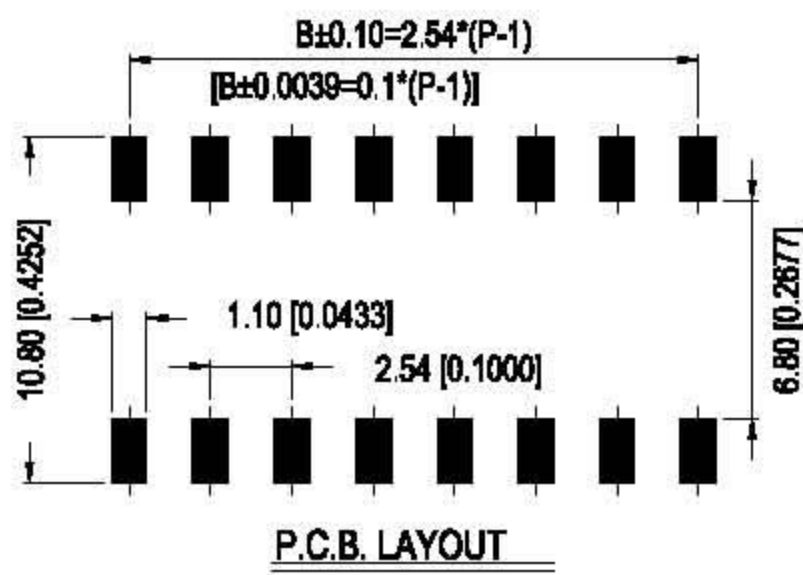
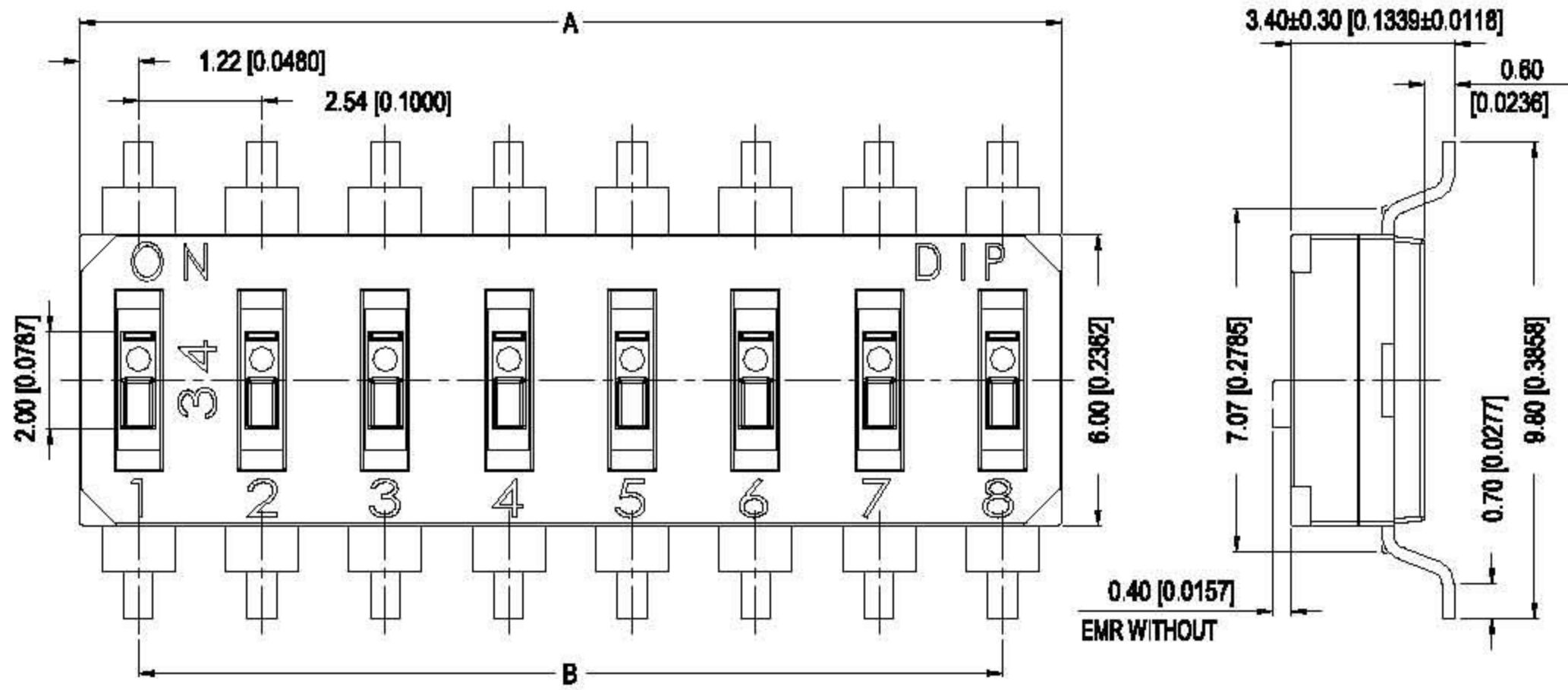


# EM(R)&EI(R) SERIES



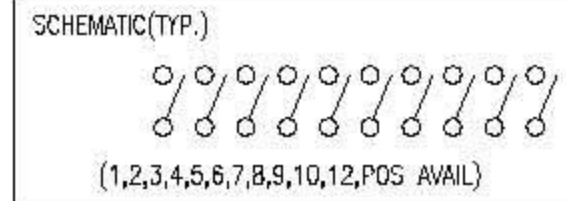
## DIMENSIONS

### EM(R)-V

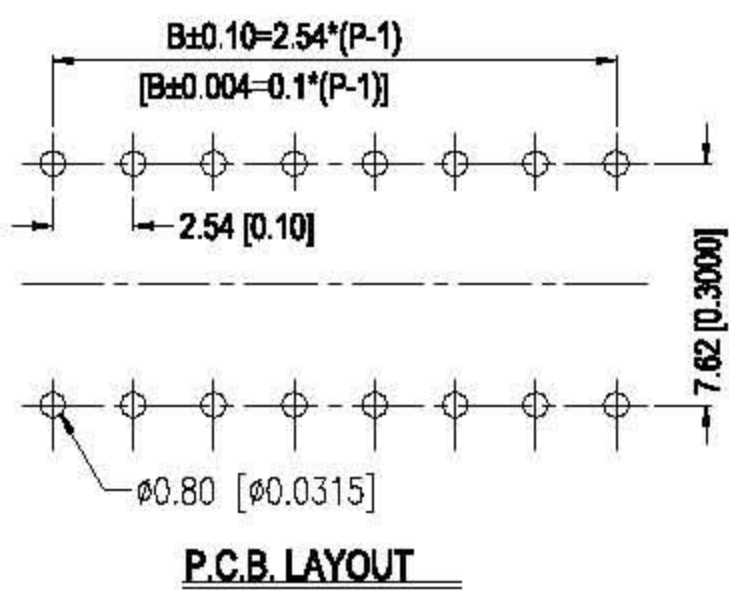
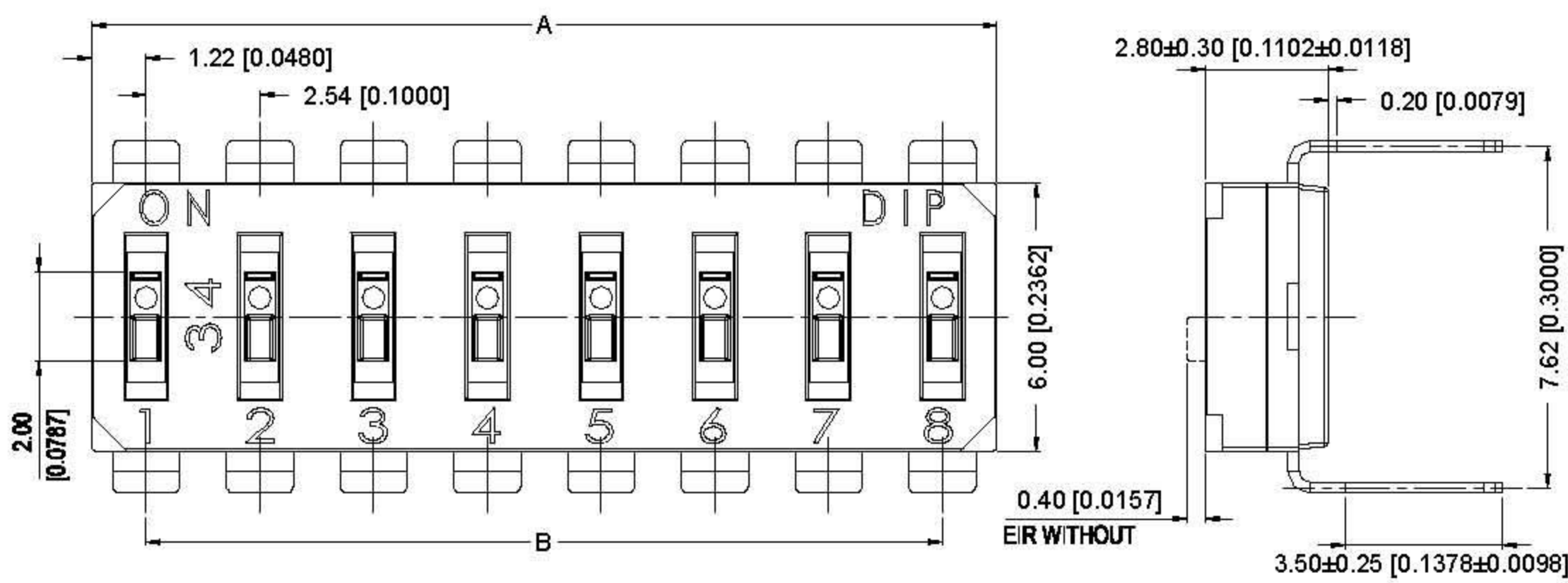


NOTE:  
 1. ALL DIMENSIONS ARE IN MILLIMETERS, BRACKETED DIMENSIONS ARE IN INCHES.  
 2. GENERAL TOLERANCES MAX. ±0.20mm.

PROD. NO.	NO. OF POS.	DIM. A	DIM. B
EM-01-V EMR-01-V	1	2.44[.096]	
EM-02-V EMR-02-V	2	4.98[.196]	2.54[.100]
EM-03-V EMR-03-V	3	7.52[.296]	5.08[.100]
EM-04-V EMR-04-V	4	10.06[.396]	7.62[.300]
EM-05-V EMR-05-V	5	12.60[.496]	10.16[.400]
EM-06-V EMR-06-V	6	15.14[.596]	12.70[.500]
EM-07-V EMR-07-V	7	17.68[.696]	15.24[.600]
EM-08-V EMR-08-V	8	20.22[.796]	17.78[.700]
EM-09-V EMR-09-V	9	22.76[.896]	20.32[.800]
EM-10-V EMR-10-V	10	25.3[0.996]	22.86[.900]
EM-12-V EMR-12-V	12	30.38[1.196]	27.94[1.100]

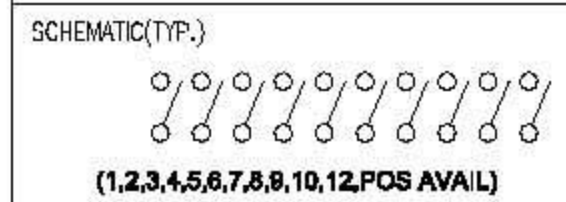


### EI(R)-V



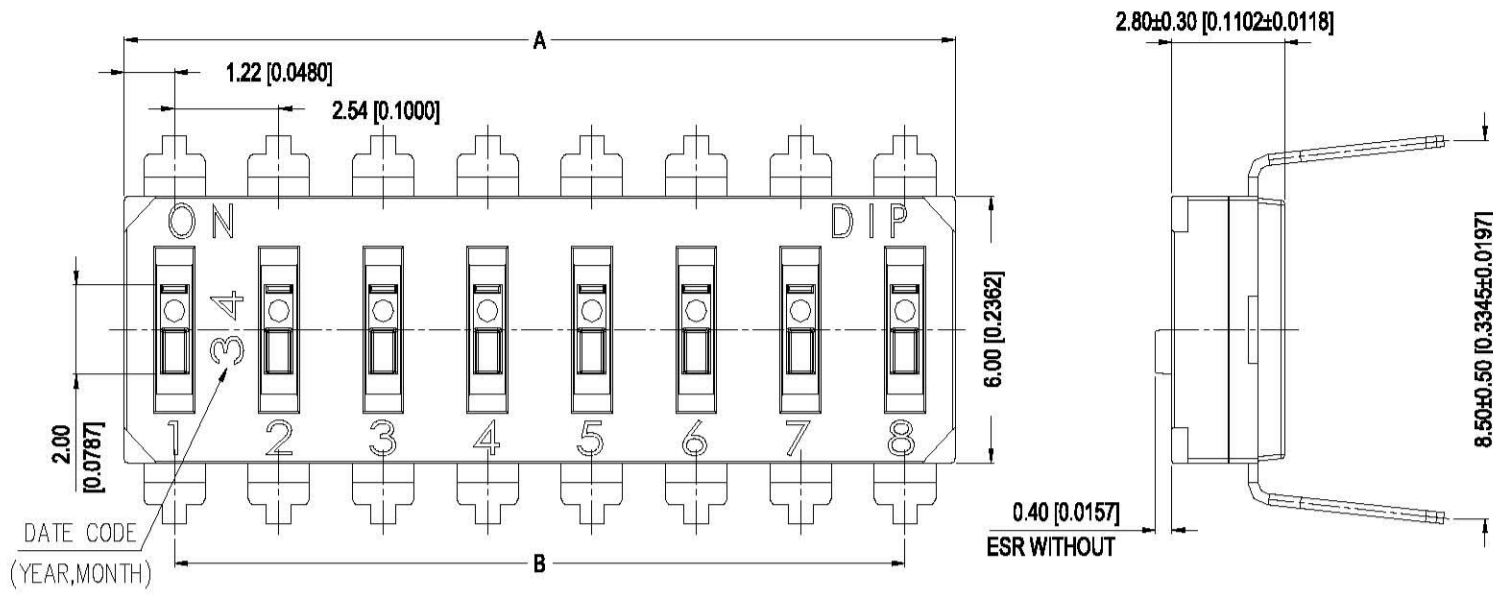
NOTE:  
 1. ALL DIMENSIONS ARE IN MILLIMETERS, BRACKETED DIMENSIONS ARE IN INCHES.  
 2. GENERAL TOLERANCES MAX. ±0.20mm.

PROD. NO.	NO. OF POS.	DIM. A	DIM. B
EI-01-V EIR-01-V	1	2.44[.096]	
EI-02-V EIR-02-V	2	4.98[.196]	2.54[.100]
EI-03-V EIR-03-V	3	7.52[.296]	5.08[.100]
EI-04-V EIR-04-V	4	10.06[.396]	7.62[.300]
EI-05-V EIR-05-V	5	12.60[.496]	10.16[.400]
EI-06-V EIR-06-V	6	15.14[.596]	12.70[.500]
EI-07-V EIR-07-V	7	17.68[.696]	15.24[.600]
EI-08-V EIR-08-V	8	20.22[.796]	17.78[.700]
EI-09-V EIR-09-V	9	22.76[.896]	20.32[.800]
EI-10-V EIR-10-V	10	25.3[0.996]	22.86[.900]
EI-12-V EIR-12-V	12	30.38[1.196]	27.94[1.100]

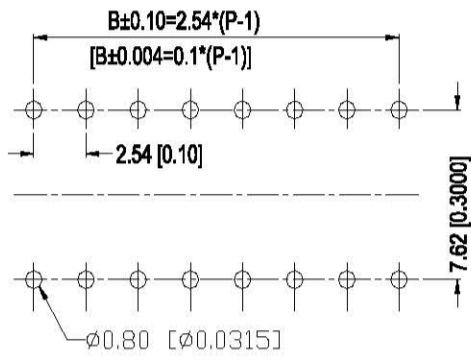
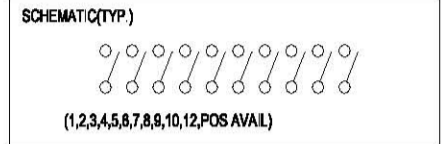


# DIMENSIONS

ES(R)-V



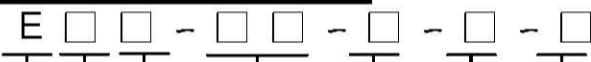
PROD. NO.	NO. OF POS.	DIM. A	DIM. B
ES-01-V ESR-01-V	1	2.44[.096]	
ES-02-V ESR-02-V	2	4.98[.196]	2.54[.100]
ES-03-V ESR-03-V	3	7.52[.296]	5.08[.100]
ES-04-V ESR-04-V	4	10.06[.396]	7.62[.300]
ES-05-V ESR-05-V	5	12.60[.496]	10.16[.400]
ES-06-V ESR-06-V	6	15.14[.596]	12.70[.500]
ES-07-V ESR-07-V	7	17.68[.696]	15.24[.600]
ES-08-V ESR-08-V	8	20.22[.796]	17.78[.700]
ES-09-V ESR-09-V	9	22.76[.896]	20.32[.800]
ES-10-V ESR-10-V	10	25.3[0.996]	22.86[.900]
ES-12-V ESR-12-V	12	30.38[1.196]	27.94[1.100]



P.C.B. LAYOUT

NOTE:  
 1.ALL DIMENSIONS ARE IN MILLIMETERS,BRACKETED DIMENSIONS ARE IN INCHES.  
 2.GENERAL TOLERANCES MAX.±0.20mm.

# HOW TO ORDER



- Package Style  
 = Tube  
 T/R= Tape & Reel
- Soldering :  
 V = Lead Free Solderable
- Seal Tape :  
 = Without Tape  
 T = Top Tape Sealed  
 (For Recessed Actuator Only)
- Number Of Positions :  
 01.02.03.04.05.06.07.08.09.10.12 Positions.
- Actuator Type :  
 = Raised Actuator  
 R = Recessed Actuator
- Terminal Type :  
 M = S.M.T Type  
 I = Through Hole Type
- End-Stackable Dip Switch



## **SPECIFICATION**

### **△MECHANICAL**

Mechanical Life: 2,000 operations.  
 Operation Force: 1,000gf max.  
 Stroke: 1.0 mm  
 Operation Temp: -20°C to +85°C  
 Storage Temperature: -40°C to +85°C

### **△ELECTRICAL**

Electrical Life: 2,000 cycles.  
 Rating: 25 mA, 24 VDC.  
 Contact resistance: 100mΩ min. at 500VDC.  
 Insulation Resistance: 100MΩ max, at 500 VDC.  
 Dielectric Strength: 500VAC/1 minute.  
 Contact Arrangement 1 pole throw.

## **MATERIAL**

△BASE & COVER: UL94V-0 Nylon High-Temp Thermoplastic. Color: Black.  
 △ACTUATOR: UL94V-0 LCP High-Temp Thermoplastic. Color: White.  
 △CONTACT: Alloy Copper with gold plated.  
 △TERMINAL: Brass with gold plated.  
 △TAPE: Kapton.

## **SOLDERING PROCESSES**

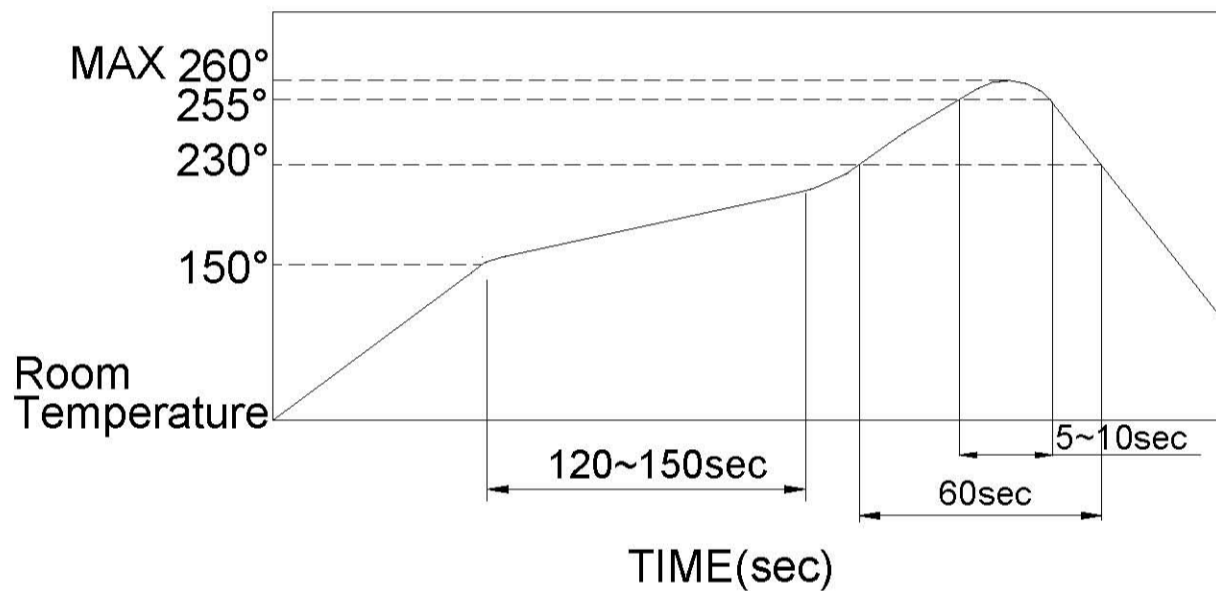
△WAVE SOLDERING: Recommended solder temperature at 500°F(260°C) max. of 5 seconds for through hole type.

△HAND SOLDERING: Use a soldering iron of 30 watts, controlled at 350°C approximately max 5 seconds while applying.

△REFLOW SOLDERING: When applying reflow soldering, the peak temperature or the reflow Oven should be set at 260°C max.

△Do not wash the switch except top tape sealed type, which suitable for spray cleaning method from top of the s/w.

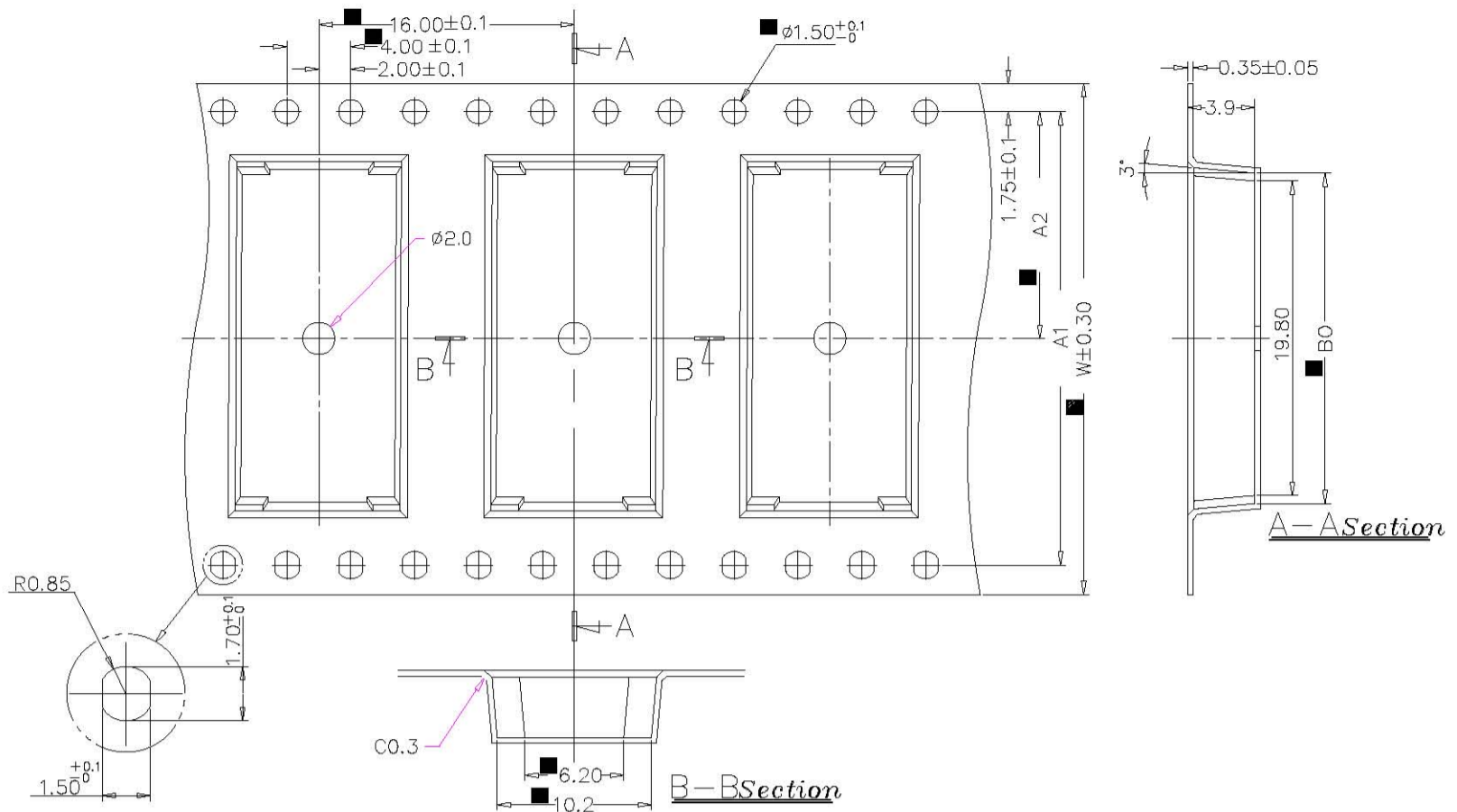
△Reflow Temperature Profile:



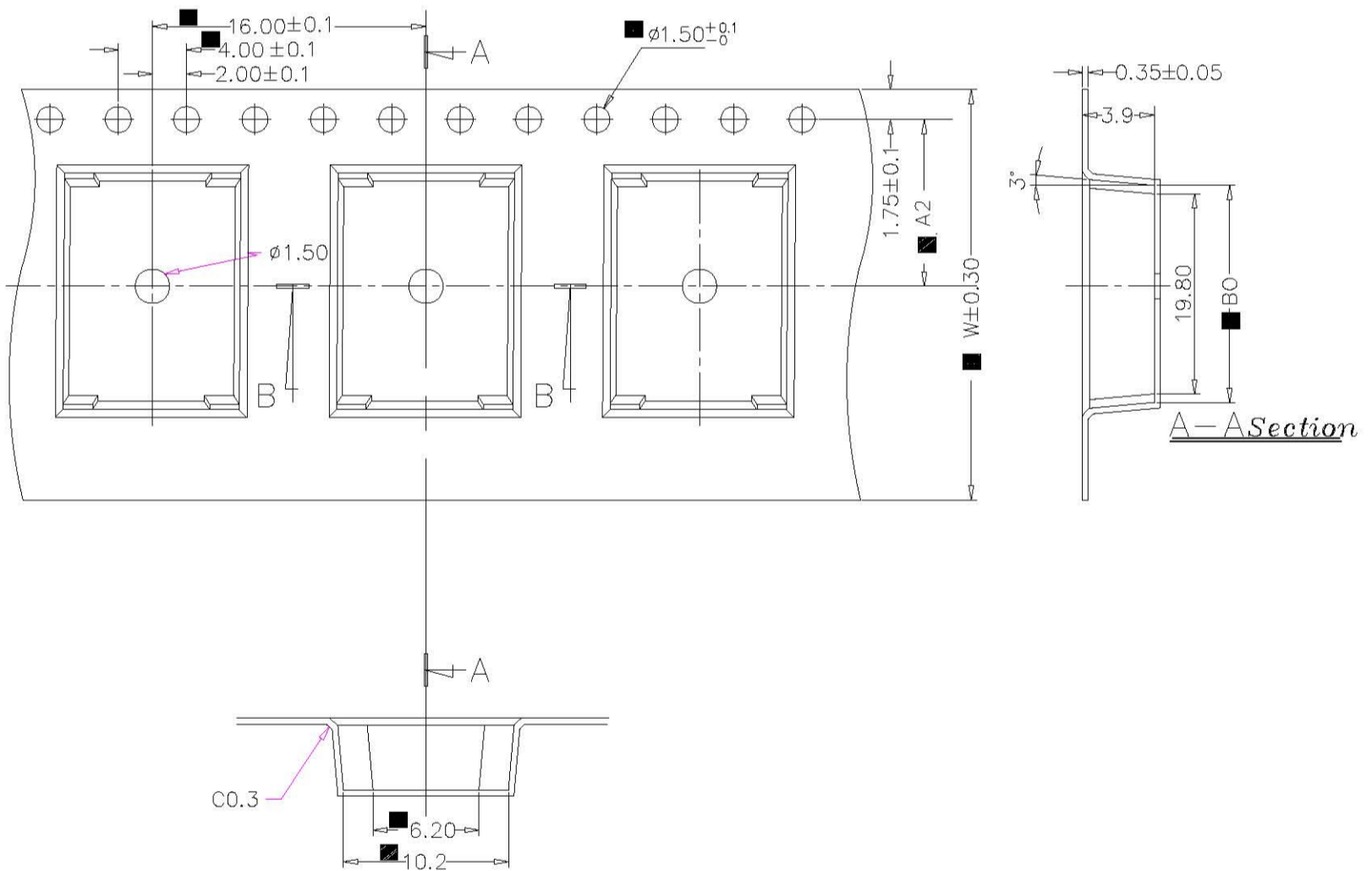
## **PACKING**

Part Number	Number Per Tube	Number Per Reel
EM · EI(R)-01	194	-
EM · EI(R)-02	95	-
EM · EI(R)-03	63	-
EM · EI(R)-04	47	-
EM · EI(R)-05	38	-
EM · EI(R)-06	31	-
EM · EI(R)-07	27	-
EM · EI(R)-08	23	-
EM · EI(R)-09	21	-
EM · EI(R)-10	18	-
EM · EI(R)-12	12	-
EM(R)-01 · 02 · 03	-	900
04 · 05 · 06 ·		
07 · 08 · 09 ·		
10 · 12 ·		

EM(R) REEL



EM(R)-07~12 carrier

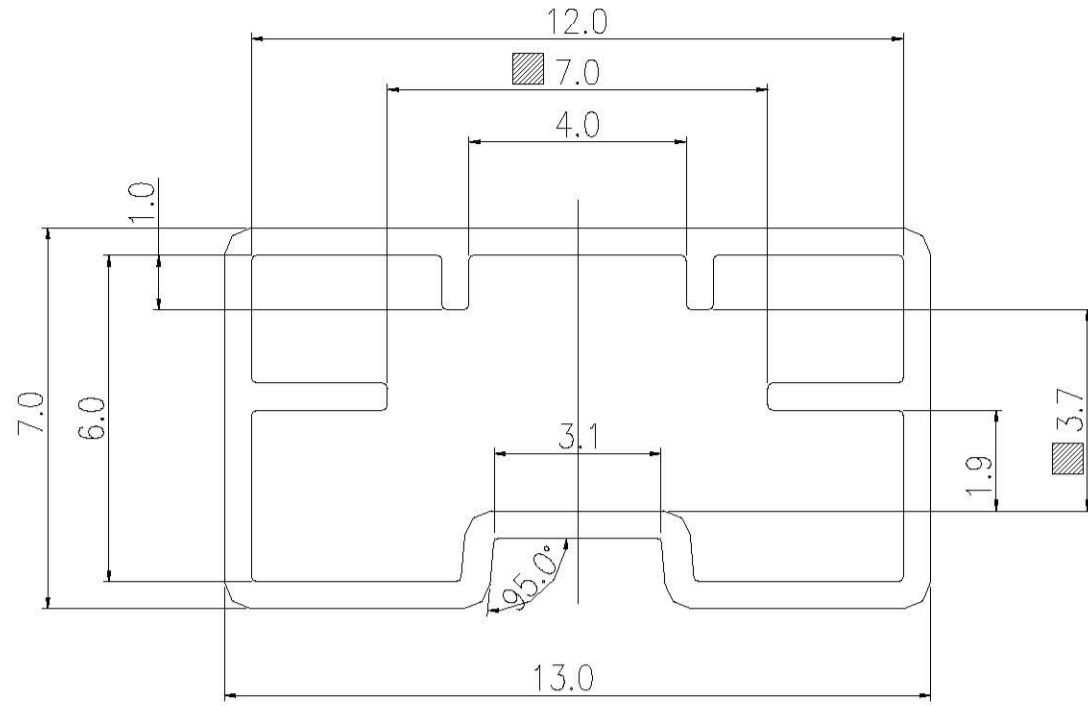


EM(R)-01~06 carrier

General Tolerance :  $\pm 0.1\text{mm}$

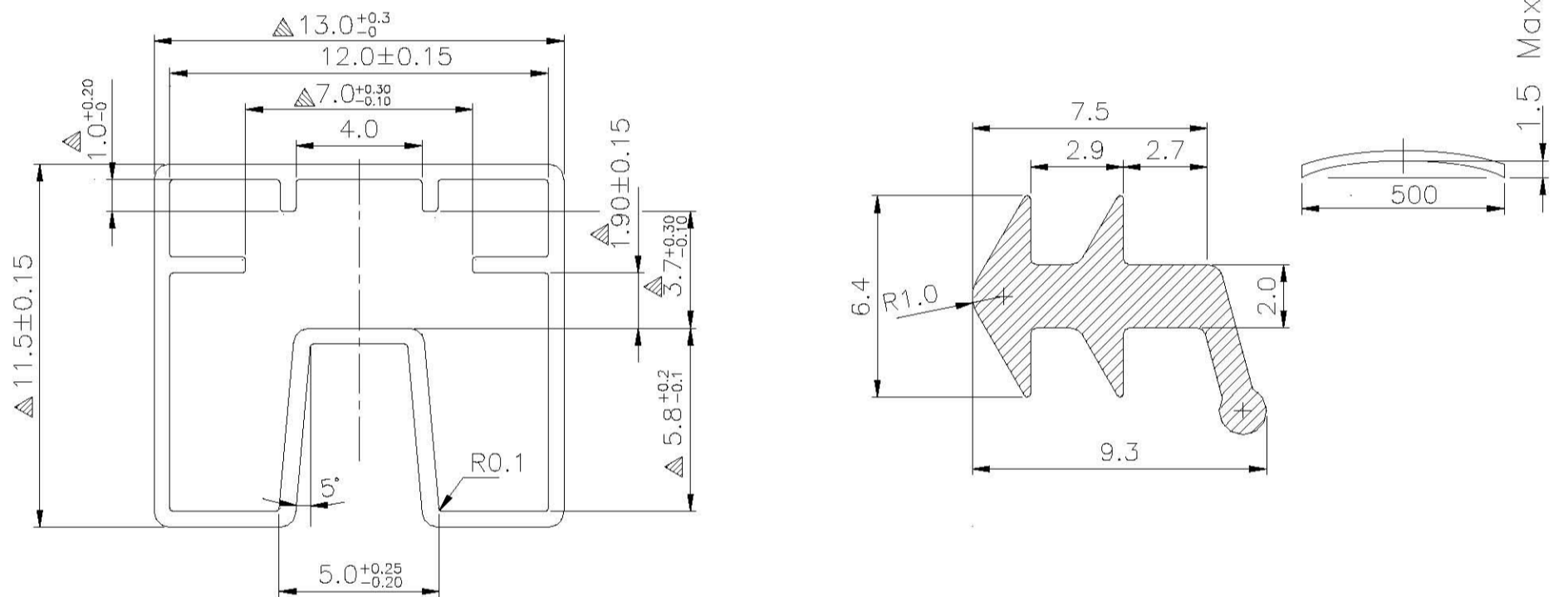
6265C0000	EM(R)-12	44.0	30.88	40.40	20.20
6265A0000	EM(R)-10	44.0	25.80	40.40	20.20
626590000	EM(R)-09	44.0	23.26	40.40	20.20
626580000	EM(R)-08	32.0	20.70	28.40	14.20
626570000	EM(R)-07	32.0	18.18	28.40	14.20
626560000	EM(R)-06	24.0	15.60		11.50
626550000	EM(R)-05	24.0	13.10		11.50
626540000	EM(R)-04	24.0	10.56		11.50
626530000	EM(R)-03	16.0	7.85		7.50
626520000	EM(R)-02	16.0	5.30		7.50
626510000	EM(R)-01	12.0	2.75		5.50
PART NO:	PART NAME:	W	B0	A1	A2

EM(R) TUBE



General Tolerance :  $\pm 0.20\text{mm}$

EII(R) TUBE



General Tolerance :  $\pm 0.20\text{mm}$