



Series 220

7x7mm Compact Rotary DIP Switch

- Robust metal bracket design
- Standard through hole and surface mount gull-wing terminal configurations
- Binary coded decimal, Hexadecimal code and Single pole output
- Clockwise or counterclockwise rotation



Ordering Information

Series	Terminal Type	Actuator Height	Number of Positions	Code Format	Packaging Type																						
220	AM	A	04	C	R																						
<div>↓</div>		<div>↓</div>	<div>↓</div>	<div>↓</div>	<div>↓</div>																						
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* Not all performance combinations and options may be available.
Contact local CTS Representative or CTS Customer Service for availability.

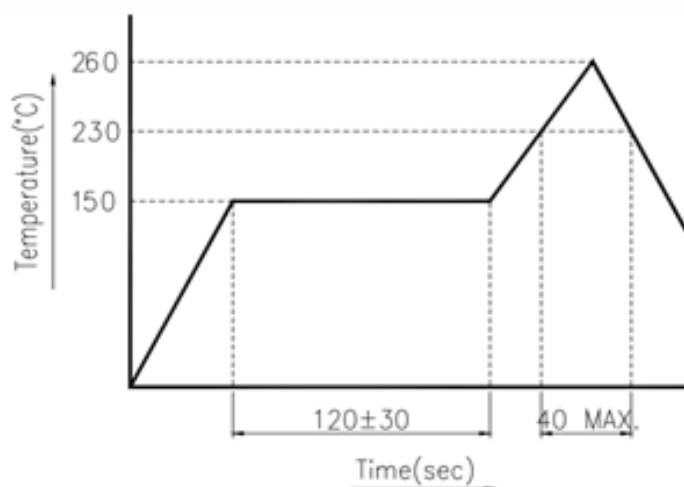
Electrical Specifications

Parameter	Conditions & Remarks	Min	Max	Unit
Output	Binary coded decimal		10	position
	Hexadecimal		16	
	Single pole		4	
Contact Resistance			100	milliohms
Insulation Resistance	Between insulated terminals	1000		megohms
Dielectric Strength	250 Vac between adjacent switches		1	minute
Nonswitching Rating			100 or 50	mA or VDC
Load		1 μ A 20m		VDC

Mechanical and Environmental

Soldering	Maximum reflow temperature, 260°C for 5 seconds Maximum wave temperature, 260°C for 10 seconds Maximum manual temperature, 350°C for 4 seconds
RoHS	Lead-Free. Fully compliant to RoHS
Rotational Torque:	40~200 gf-cm
Actuation Life	10,000 steps
Marking:	Special top marking available-consult CTS
Packaging :	Standard anti-static tube packaging for through hole terminal Standard tape and reel packaging for gull wing terminal
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range:	-40°C to +85°C

Soldering Profile



Mechanical Specifications

Figure 1 – 220AM_10, 16R - Surface Mount Gull Wing, 10 and 16 Position

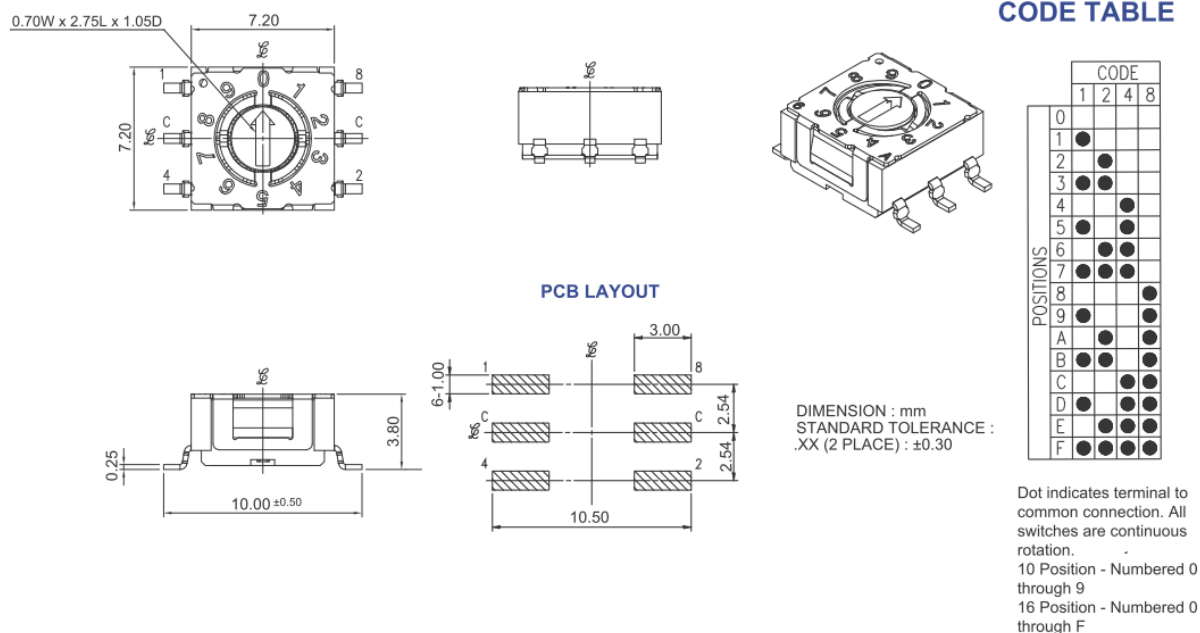


Figure 2 – 220AM_16CR - Surface Mount Gull Wing, 16 Position, Complementary code.

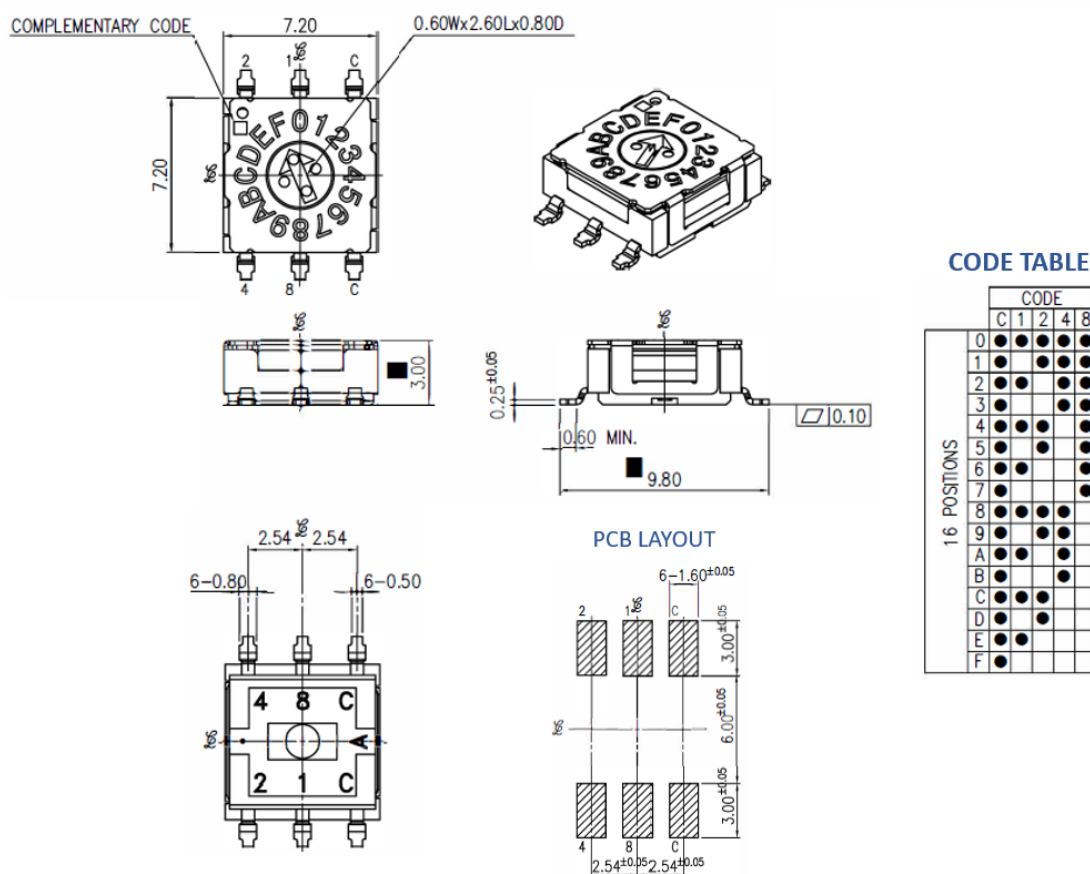


Figure 3 – 220AD_10, 16 - Standard Through Hole, 10 and 16 Position

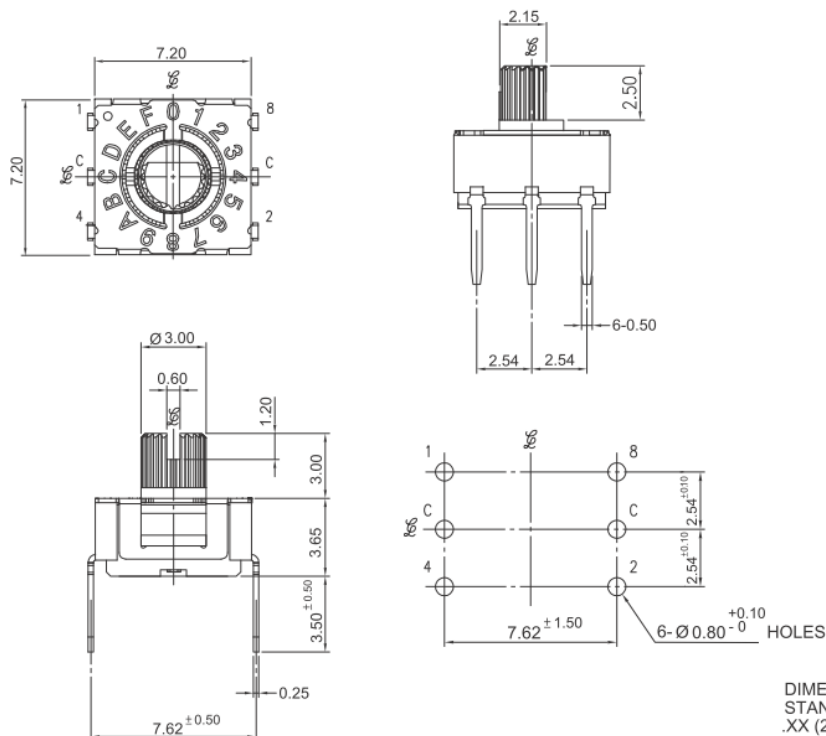


Figure 4 – 220AM_04R - Surface Mount Gull Wing, 4 Position

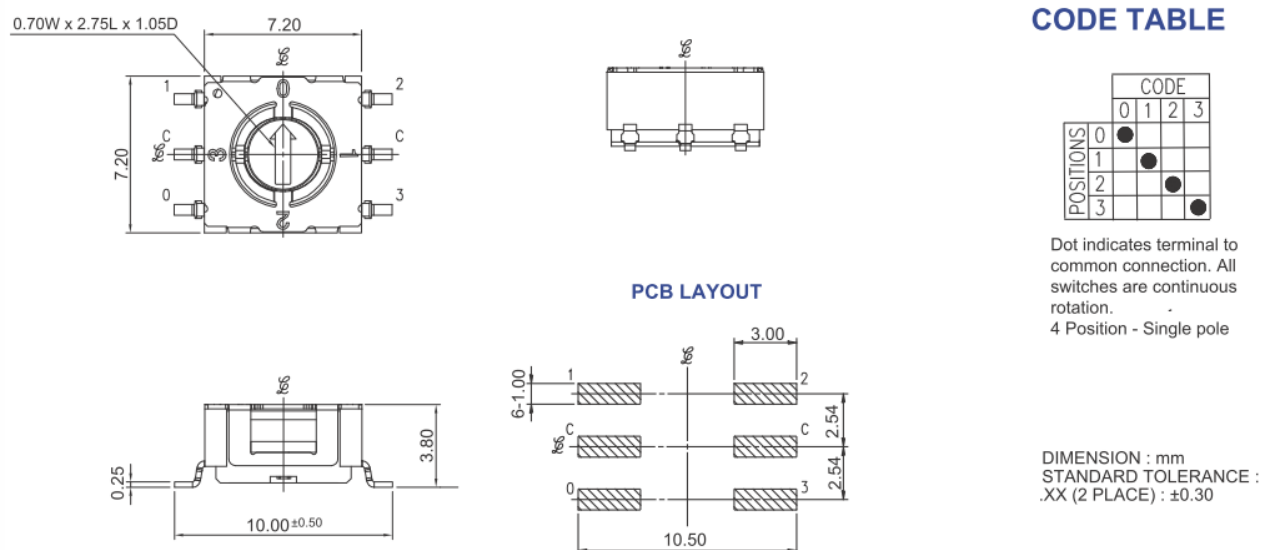
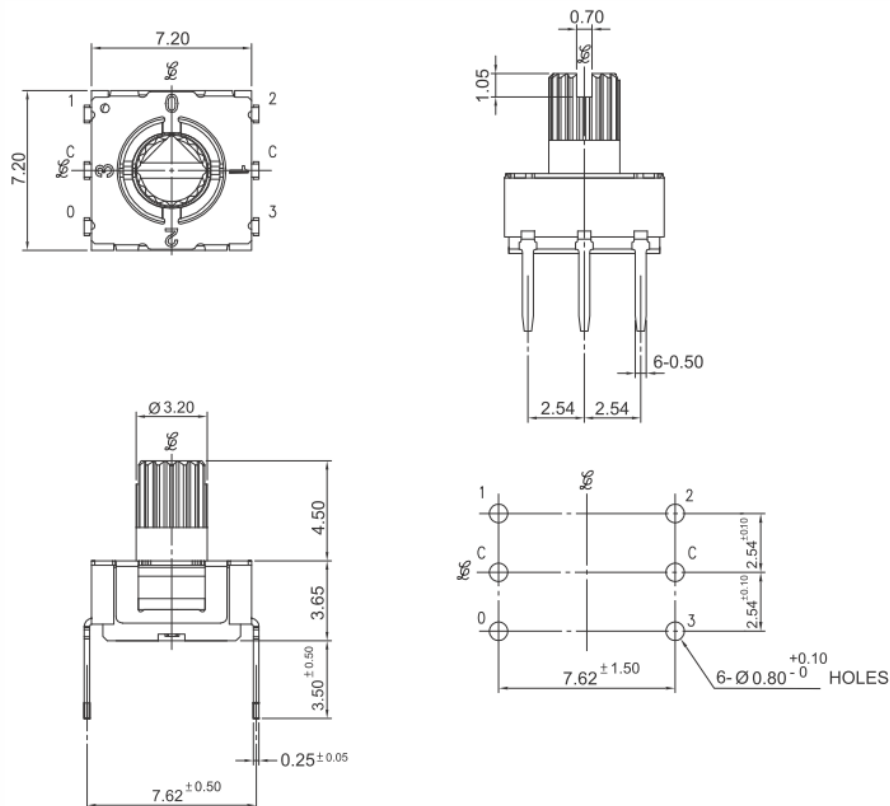


Figure 5 – 220AD_04 - Standard Through Hole, 4 Position



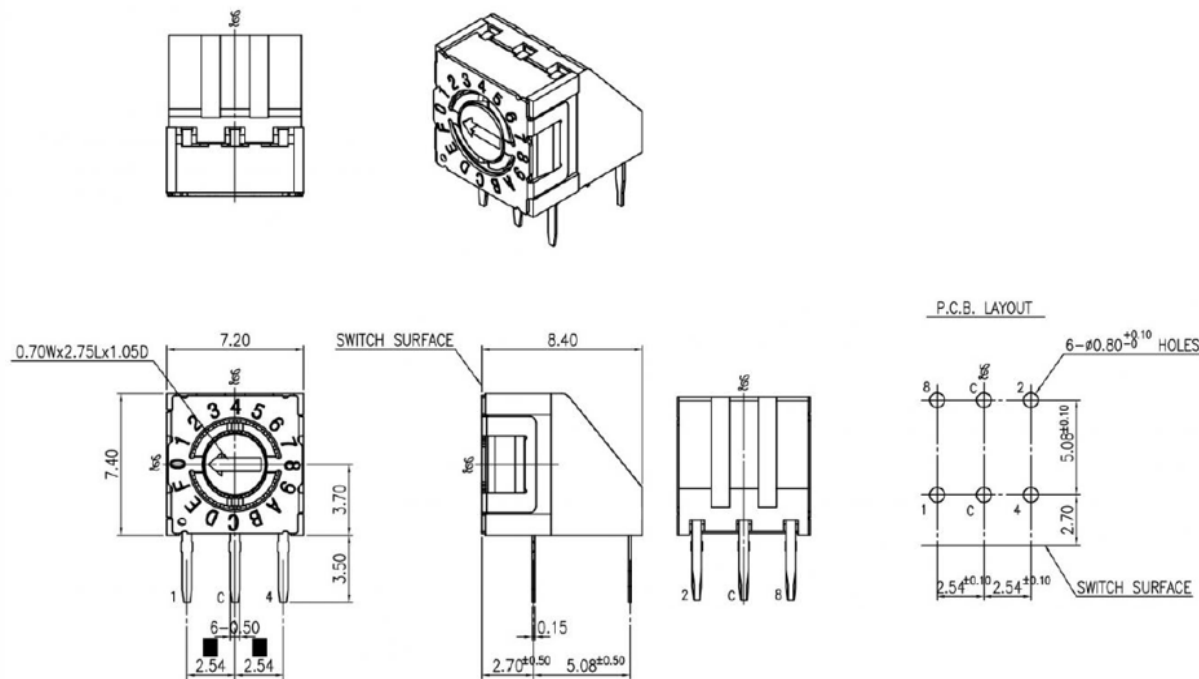
CODE TABLE

POSITIONS	CODE			
	0	1	2	3
0	●			
1		●		
2			●	
3				●

Dot indicates terminal to common connection. All switches are continuous rotation.
4 Position - Single pole

DIMENSION : mm
STANDARD TOLERANCE :
.XX (2 PLACE) : ±0.30

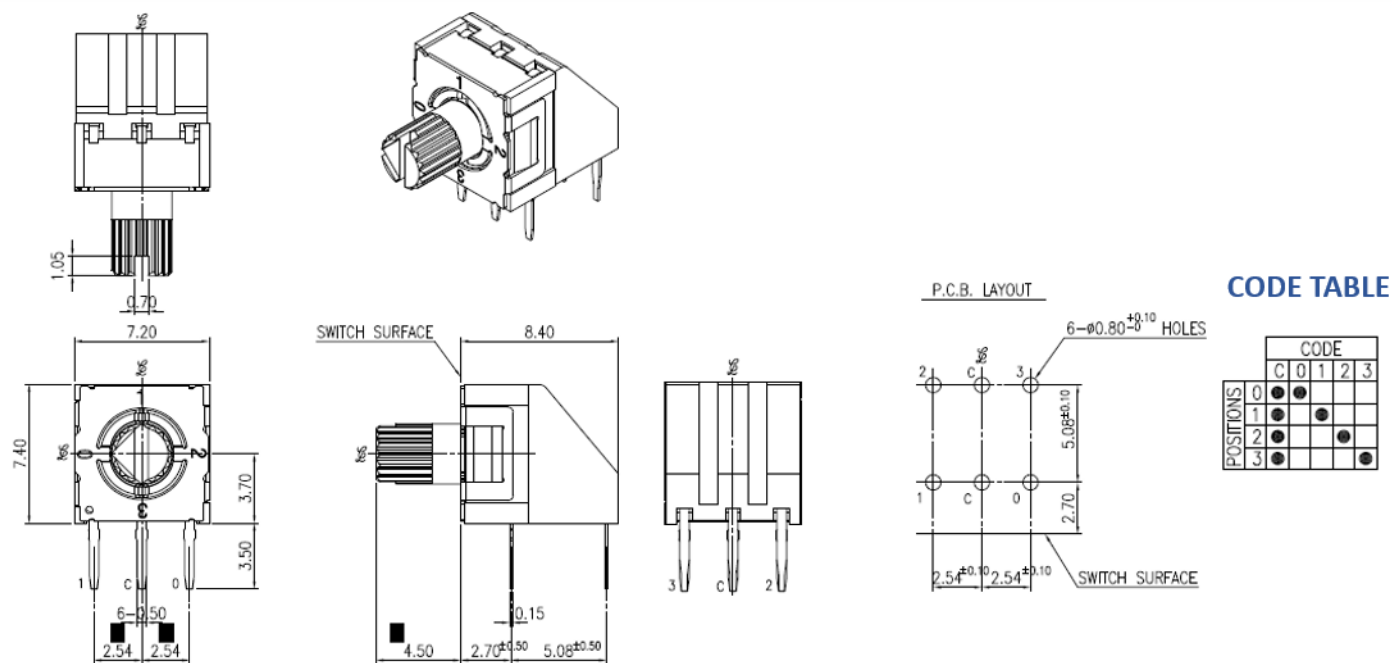
Figure 6 – 220AH_10, 16 - Standard Through Hole Right Angle, 10 and 16 Position



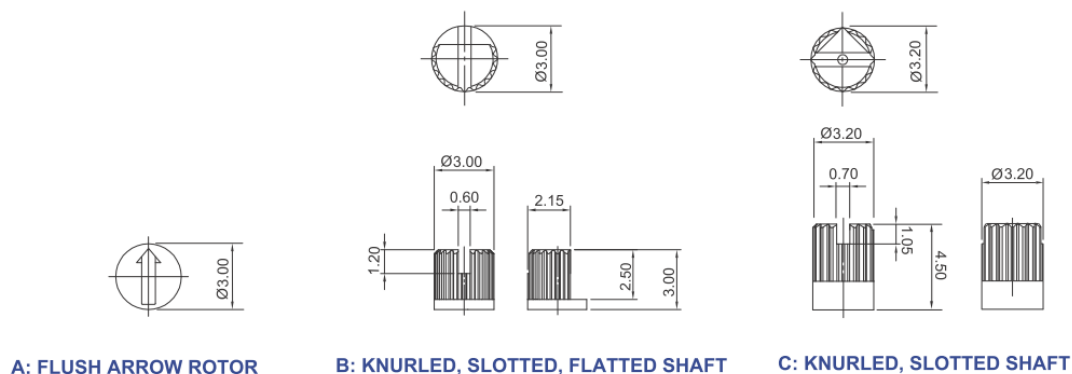
CODE TABLE

POSITIONS	CODE				
	C	1	2	4	8
0	●	●	●	●	●
1	●	●	●	●	●
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
5	●	●	●	●	●
6	●	●	●	●	●
7	●	●	●	●	●
8	●	●	●	●	●
9	●	●	●	●	●
A	●	●	●	●	●
B	●	●	●	●	●
C	●	●	●	●	●
D	●	●	●	●	●
E	●	●	●	●	●
F	●	●	●	●	●

Figure 7 – 220AH_04 - Standard Through Hole Right Angle, 4 Position

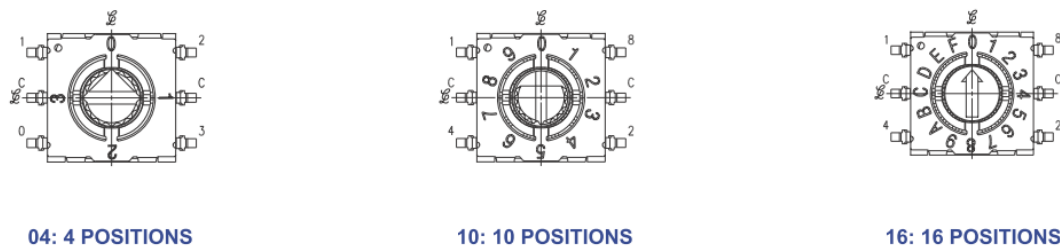


Actuator Options



DIMENSION : mm
STANDARD TOLERANCE :
.XX (2 PLACE) : ± 0.30

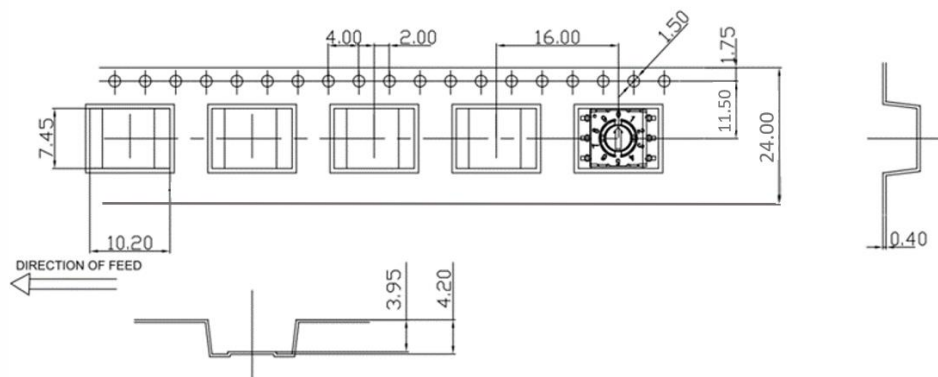
Position Options



Packing: Tape and Reel

TAPE :

(A) 220AMAxR – MATERIAL & DIMENSIONS:



MATERIAL: CONDUCTIVE POLYSTYRENE, BLACK COLOR

ALL DIMENSIONS MEET EIA-481-2A REQUIREMENTS

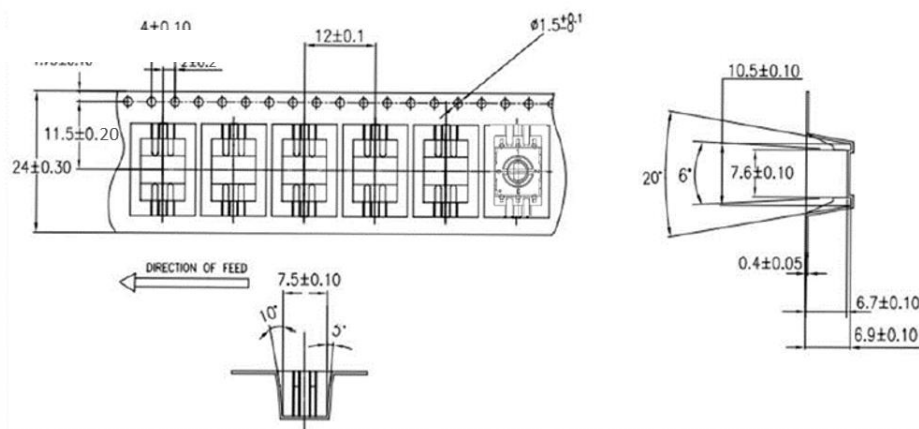
CARRIER TAPE THICKNESS: 0.40 ± 0.05 MM.

PACKING LENGTH PER 13" REEL: 16.6 METERS.

COMPONENT LOADED PER 13" REEL: 1038 PCS.

SPQ: 1000 PCS/ REEL

(B) 220AMBxR – MATERIAL & DIMENSIONS:



MATERIAL: ANTI-STATIC POLYSTYRENE, TRANSPARENT, BLACK COLOR

ALL DIMENSIONS MEET EIA-481-B REQUIREMENTS

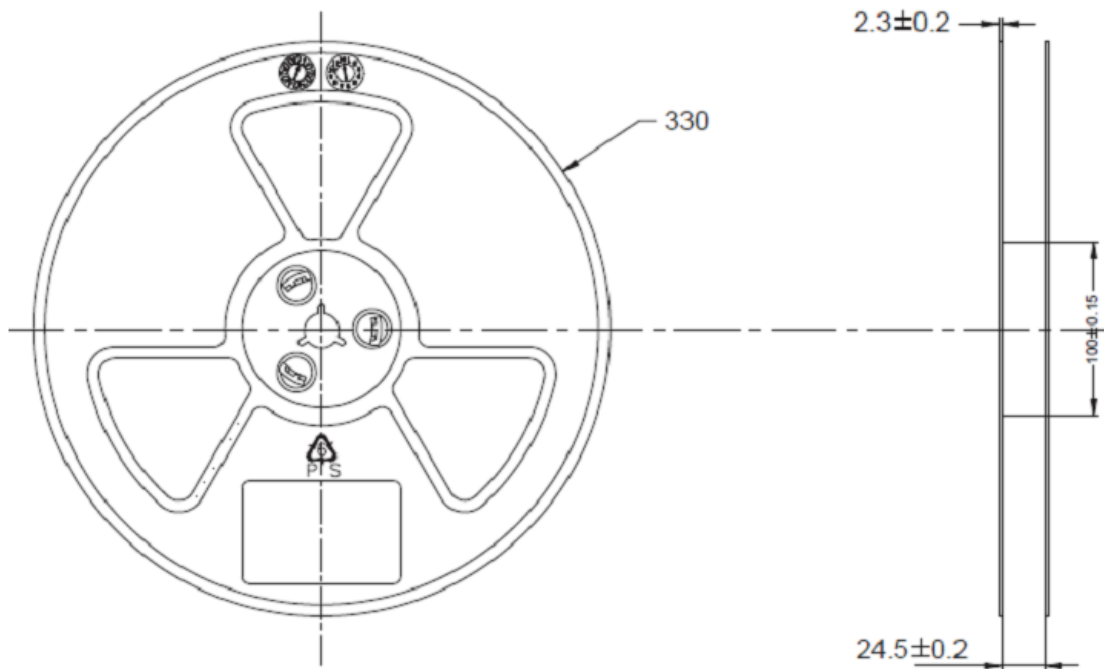
CARRIER TAPE THICKNESS: 0.40 ± 0.05 MM.

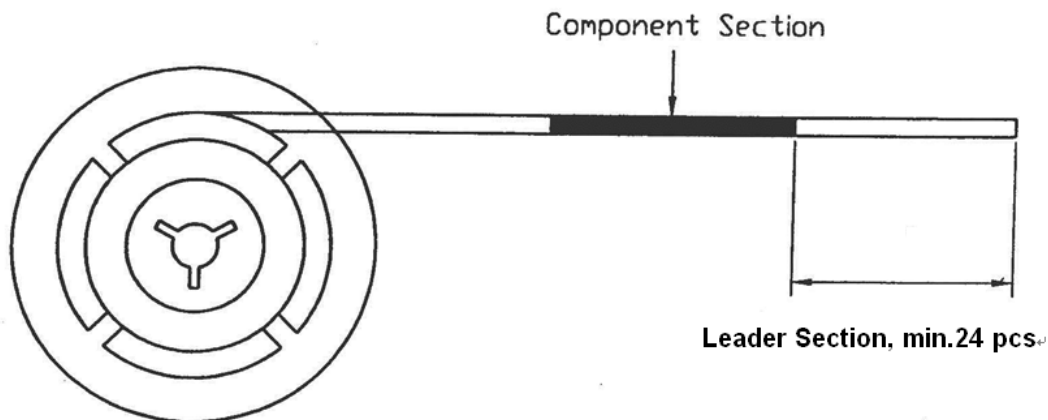
PACKING LENGTH PER 13" REEL: 8.93 METERS.

COMPONENT LOADED PER 13" REEL: 744 PCS.

SPQ: 700 PCS/REEL

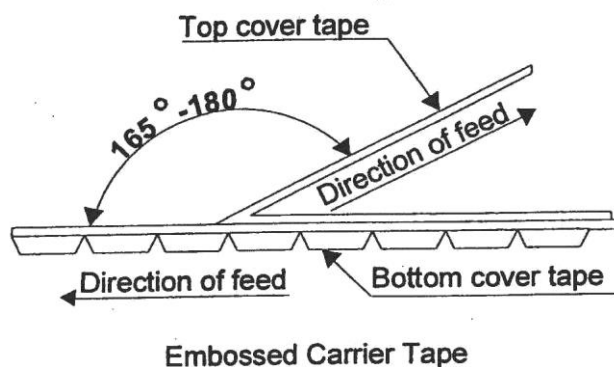
(A) SPECIFIED REEL PARTS DIMENSIONS: (COMMON TO ALL SMT COMPONENTS)





**TAPE BREAK FORCE, PEEL STRENGTH AND ANGLE:
REQUIRED SETTINGS :**

- TOP COVER TAPE PEEL FORCE : 10 ~ 140 gm
- ANGLE BETWEEN THE TOP COVER TAPE AND THE DIRECTION OF FEED DURING PEEL OFF : $165^{\circ} \sim 180^{\circ}$



THE COVER TAPES MAY NOT EXTEND OVER THE EDGE OF THE CARRIER TAPE OR COVER ANY PART OF THE SPROCKETS HOLES.

Mouser Electronics

Authorized Distributor

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