

# Compact 2.4GHz WiFi/Bluetooth Patch Antenna



APAKN1304-S2450-T



13.0 x 13.0 x 4.0mm  
RoHS/RoHS II Compliant  
MSL - 1

## FEATURES

- Compact 13.0 x 13.0mm size
- High gain of 5 dBi
- Linear polarization
- Low VSWR
- Surface mount patch antenna

## APPLICATIONS

- WiFi
- Bluetooth
- ZigBee
- ISM
- Wearables
- Mobile and portable

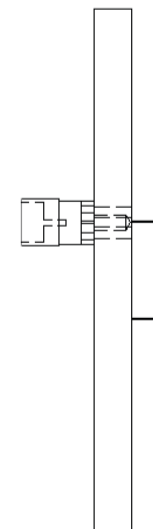
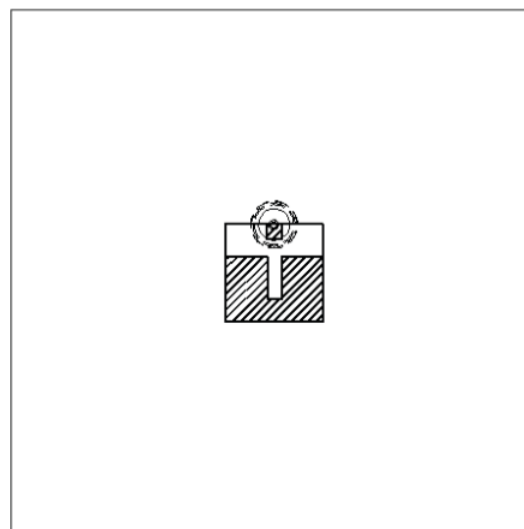
## Electrical Specifications

Parameters	Min.	Typ.	Max.	Units	Note
Receiving Frequency Range		2412 - 2484		MHz	(On a 70*70mm Ground Plane)
Bandwidth		40		MHz	Min (@ -5dB)
Return Loss		< -10 @ CF			
Peak Gain		5.0		dBi	
Polarization Model		Linear			
Impedance		50		$\Omega$	
Frequency Temperature Coefficient		20		ppm/ $^{\circ}$ C	Max

(\*) Application environment, including size of the ground plane, proximity to adjacent components, etc., will affect stated performance. Fine tuning might be required when installed on end-customer's PCB. Abracon offers Antenna Optimization Service, please contact Abracon.

## Test Conditions and Test Setup

Parts shall be measured under a condition (Temp.: 20 $^{\circ}$ C $\pm$ 15 $^{\circ}$ C, Humidity: 65% $\pm$ 20% R.H.).



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REVISED: 08.15.2018

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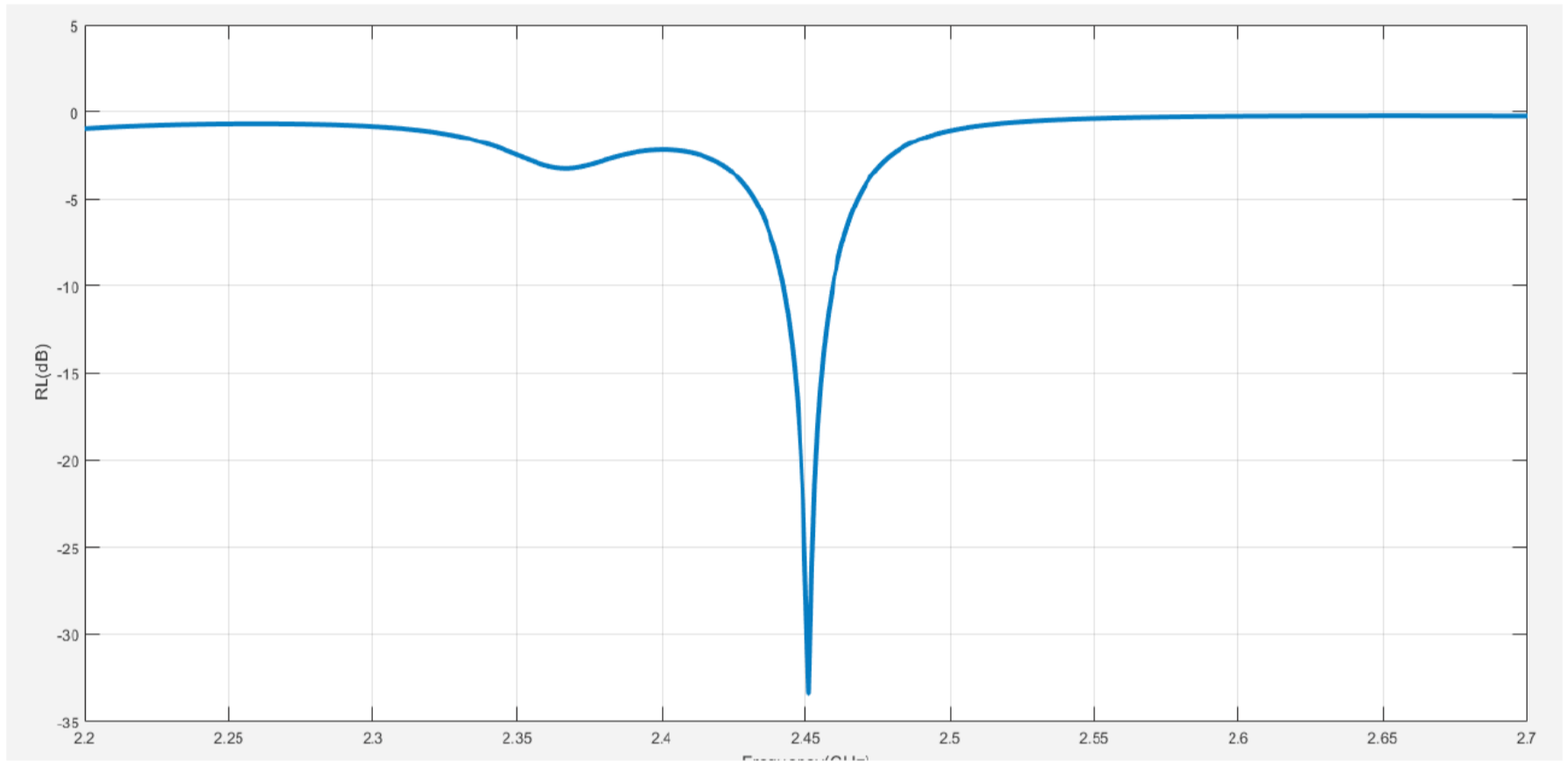


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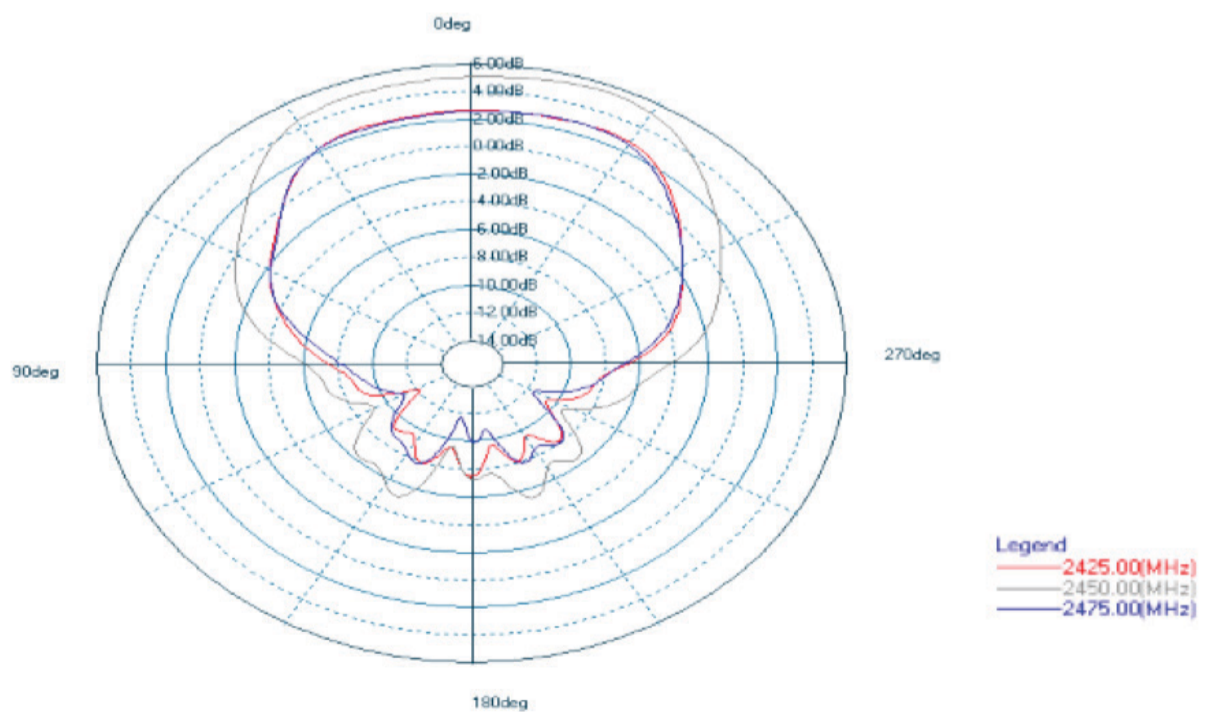
## Return Loss Characteristic



## Radiation Patterns

2D Patterns

X-Z PLANE



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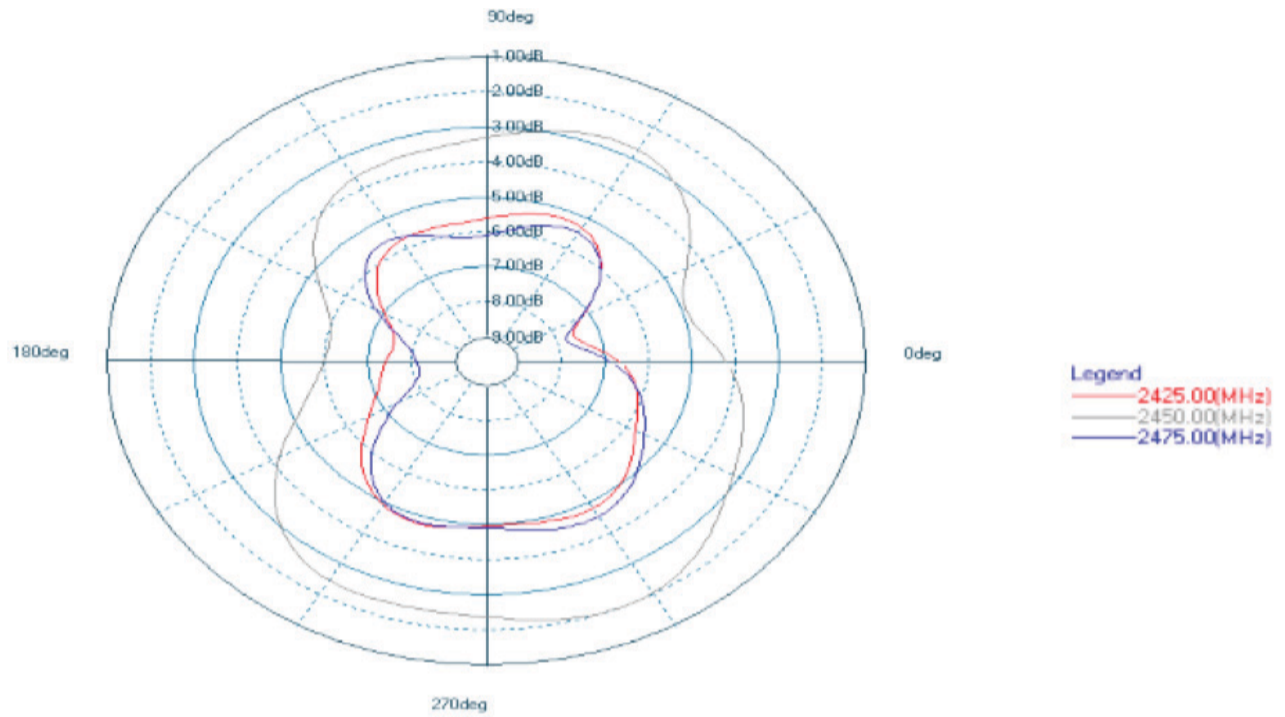


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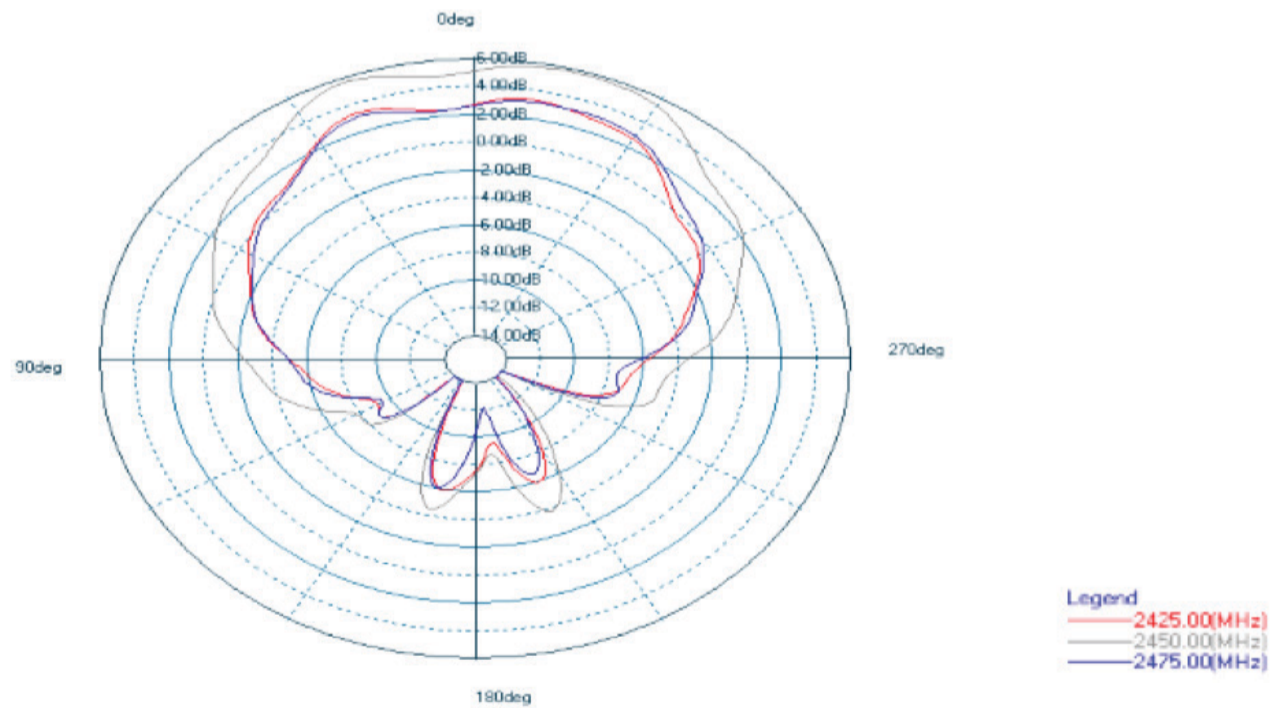


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## Radiation Patterns

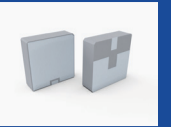


Y-Z PLANE



X-Y PLANE

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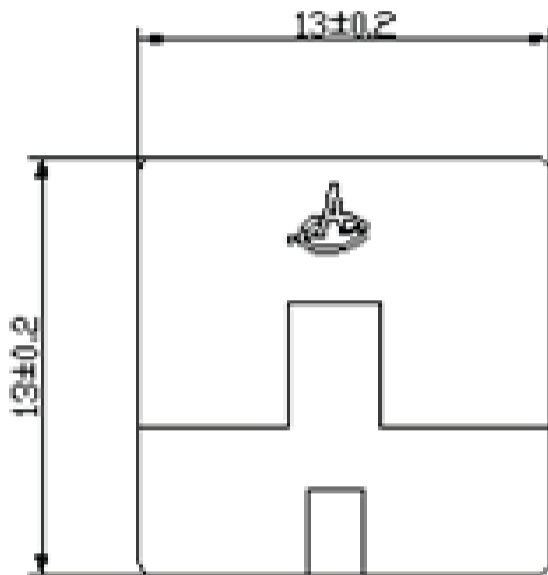
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## Outline Dimensions

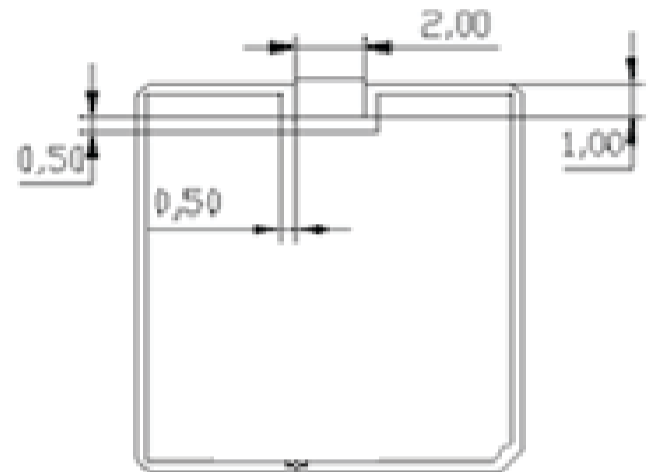
Top View



Side View



Bottom View

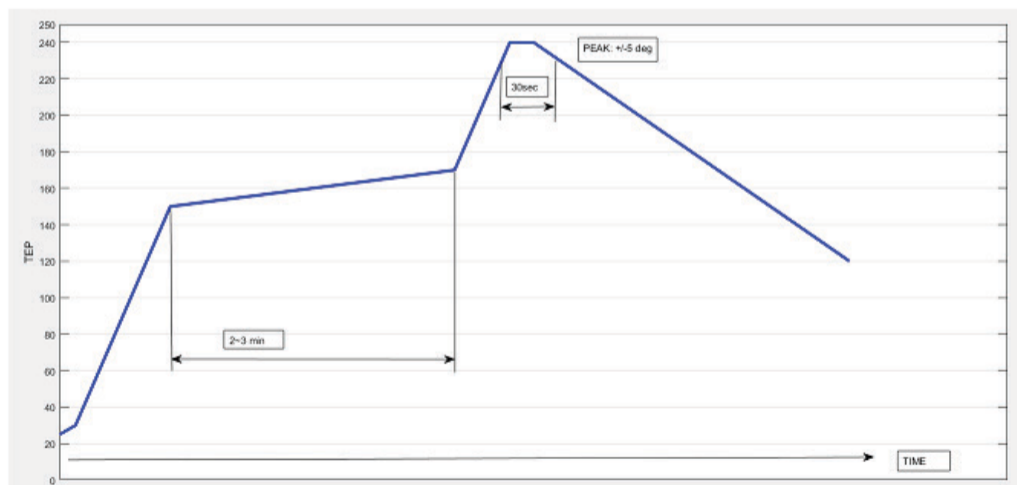


General Tolerance:  $\pm 0.3$ mm  
Unit: mm

## Recommended Reflow Soldering Profile

Solder Paste: Sn/Ag/Cu: 96.5/3.0/0.5

Recommended reflow condition:



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## Packaging

Carton has 10 inner boxes; each inner box has 1 reel (each reel for plastic bag).

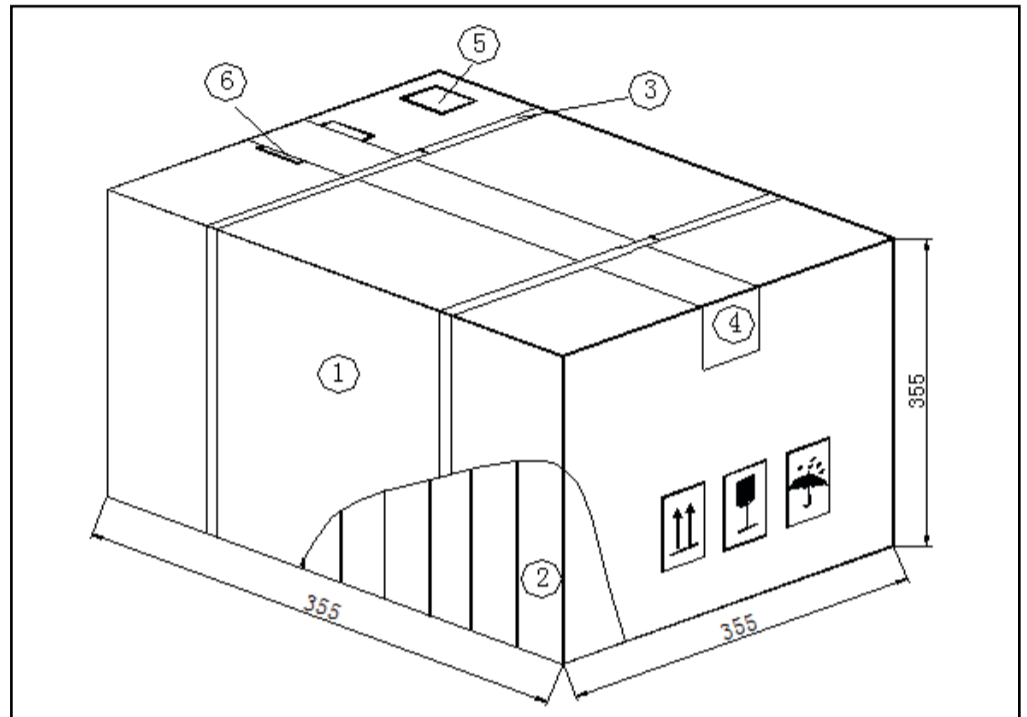
Quantity:

Per package: 10 inner boxes (5,000 pieces)

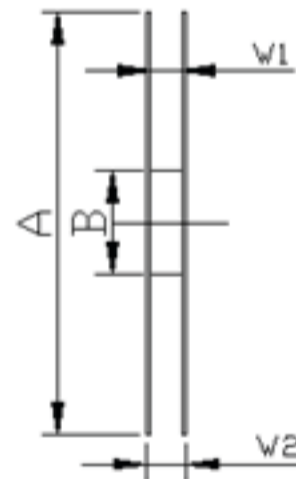
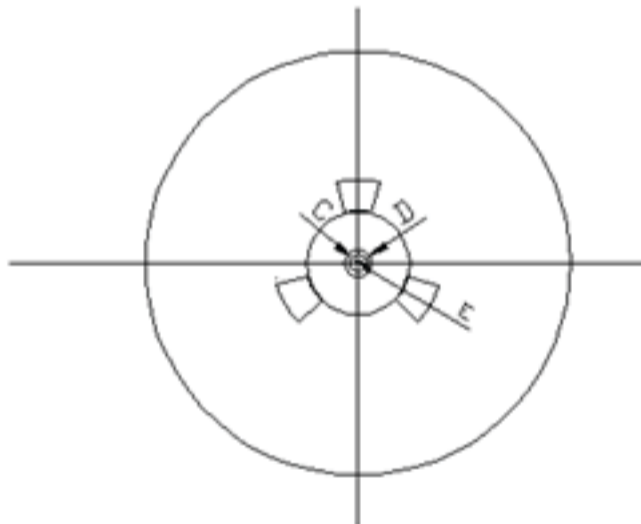
Per inner box: 1 reel

Per plastic reel: 500 pieces

Carton Dimensions (mm)



Reel Dimensions (mm)



A	B	C	D	E	W1	W2
±5.0	±5.0	±5.0	±1.0	±5.0	±2.0	±3.0
Φ330	Φ80	Φ13.5	Φ21	2.0	24	28

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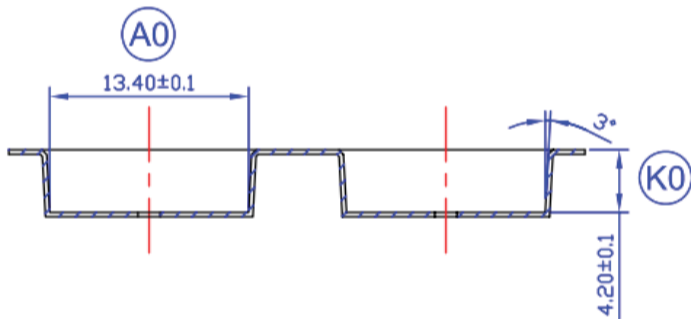
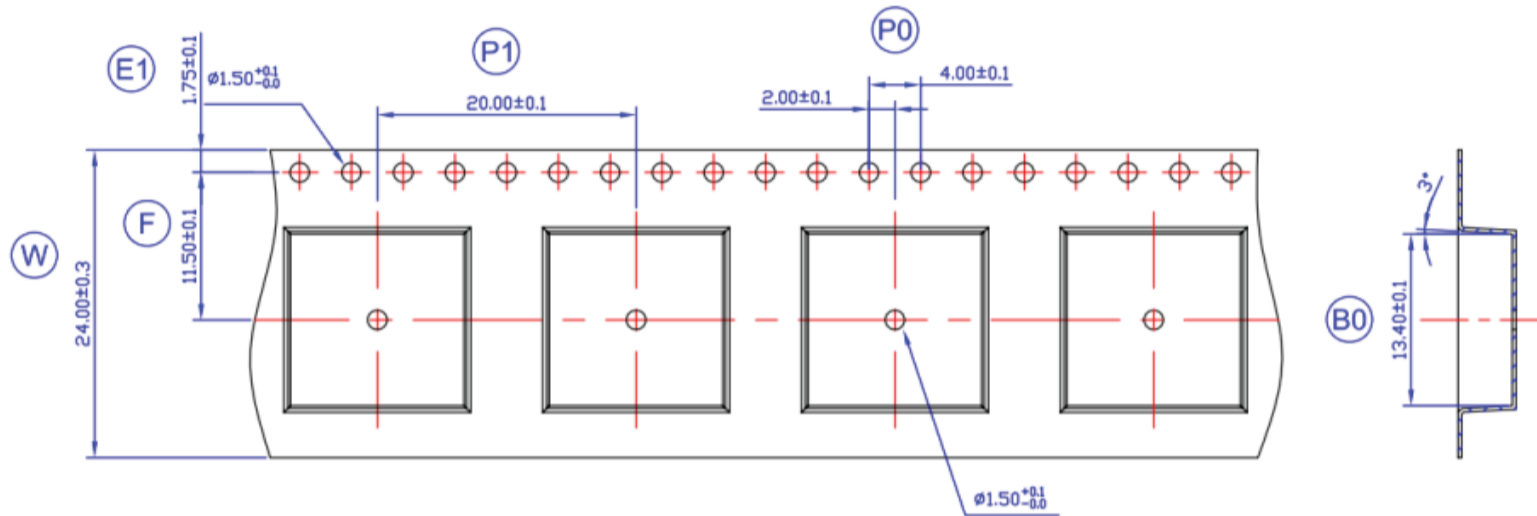
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## Packaging

Dimensions of Carrier Tape (mm)



W	24.00±0.3
E1	1.75±0.1
F	11.50±0.1
P0	4.00±0.1
P1	20.00±0.1
A0	13.40±0.1
B0	13.40±0.1
K0	4.20±0.1

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