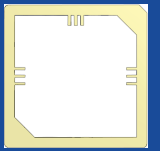


# Compact GPS Patch Antenna



APAKN0904-S1575-T



9.0 x 9.0 x 4.0mm  
RoHS/RoHS II Compliant  
MSL - 1

## FEATURES

- Compact 9.0 x 9.0 ceramic patch
- Circular polarization
- Low VSWR
- Optimized for GPS

## APPLICATIONS

- IoT
- Remote technology/monitoring
- GNSS

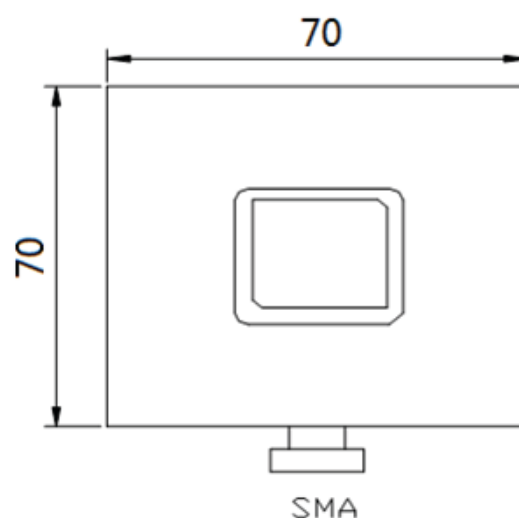
## Electrical Specifications

| Parameters                        | Min. | Typ.          | Max. | Units  | Note                        |
|-----------------------------------|------|---------------|------|--------|-----------------------------|
| Nominal Frequency                 |      | 1575.42±1.023 |      | MHz    | (On a 70*70mm Ground Plane) |
| Return Loss                       |      |               | -10  | dB     |                             |
| Peak Gain                         |      |               | 0.5  | dBi    |                             |
| Polarization Model                | RHCP |               |      |        |                             |
| Impedance                         | 50   |               |      | Ω      |                             |
| Frequency Temperature Coefficient |      |               | 20   | ppm/°C |                             |

(\*) 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°C±15°C, Humidity: 65%±20% R.H.).



General tolerance: ±1mm  
Unit: mm

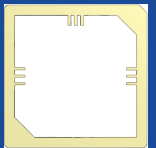


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# Compact GPS Patch Antenna

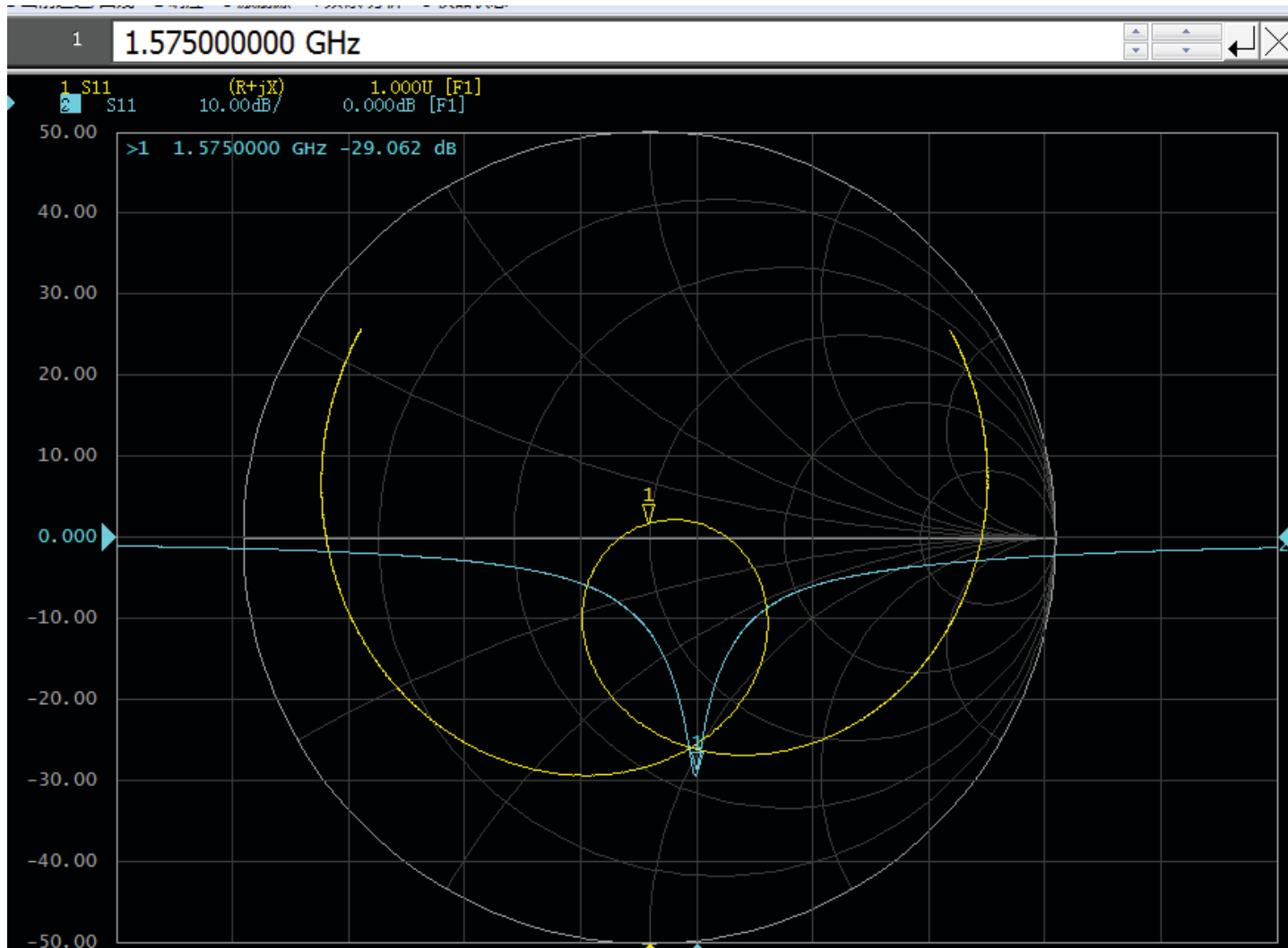


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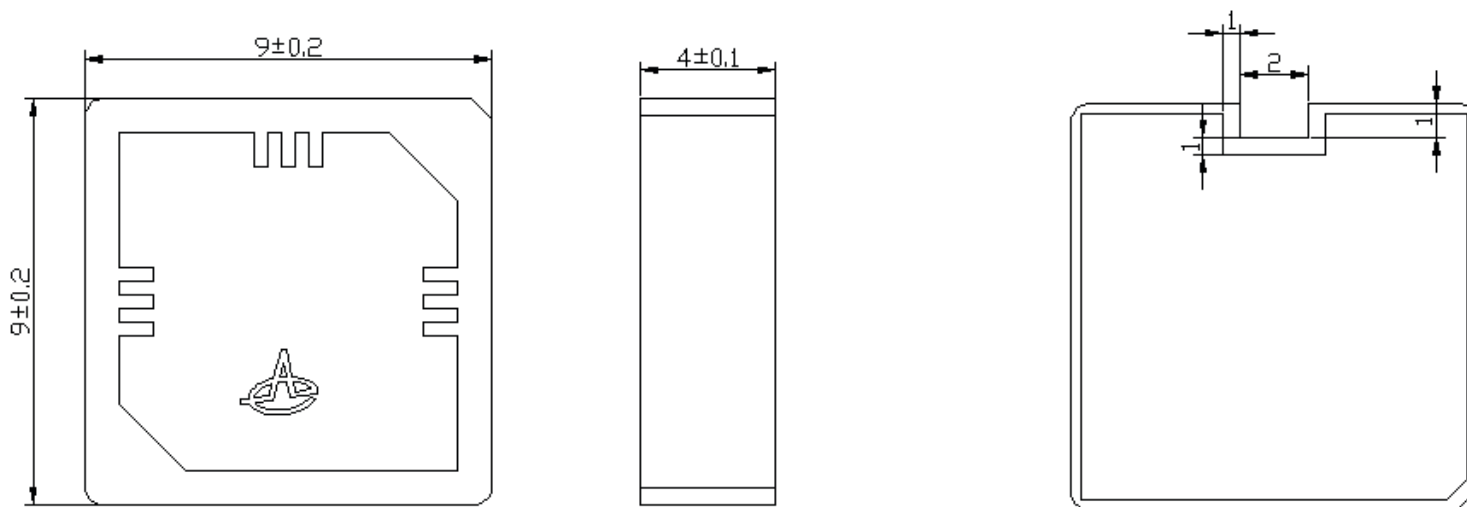


9.0 x 9.0 x 4.0mm  
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MSL - 1

## Return Loss Characteristic



## Outline Drawing and Dimensions



General Tolerance:  $\pm 0.2$  mm  
Unit: mm

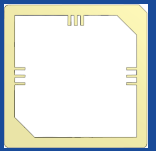


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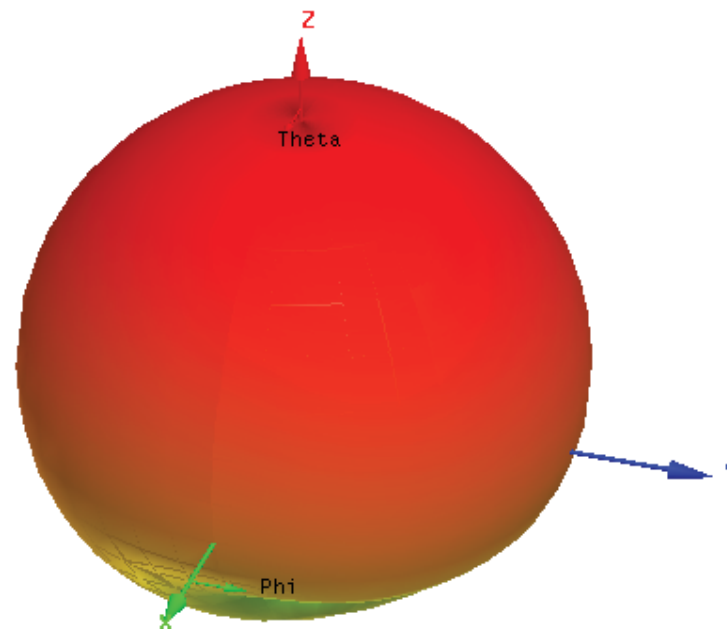
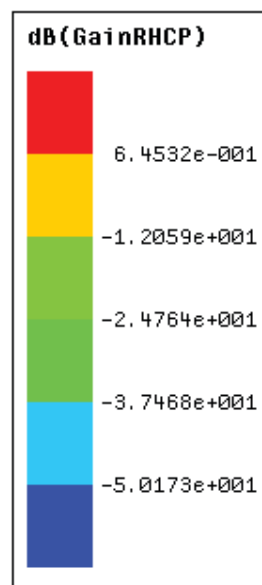
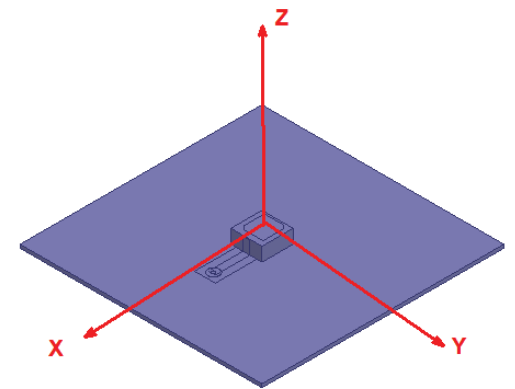
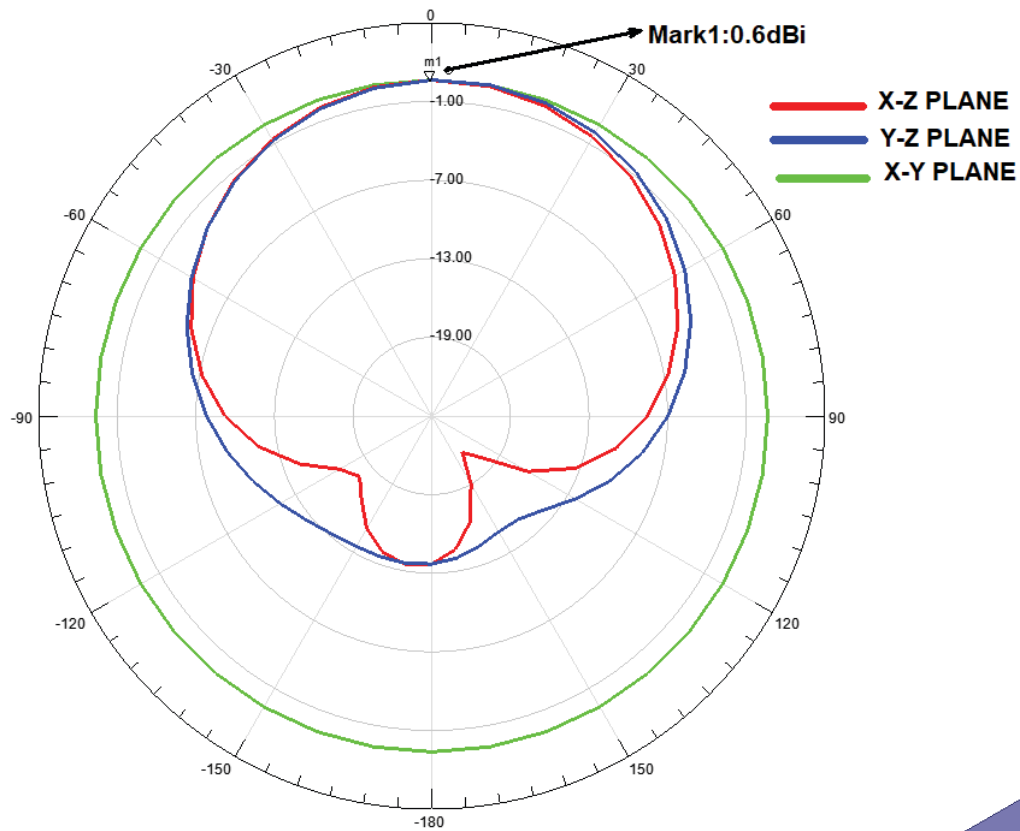


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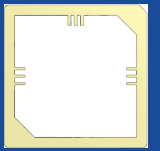


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## Radiation Pattern (1575 MHz)



# Compact GPS Patch Antenna



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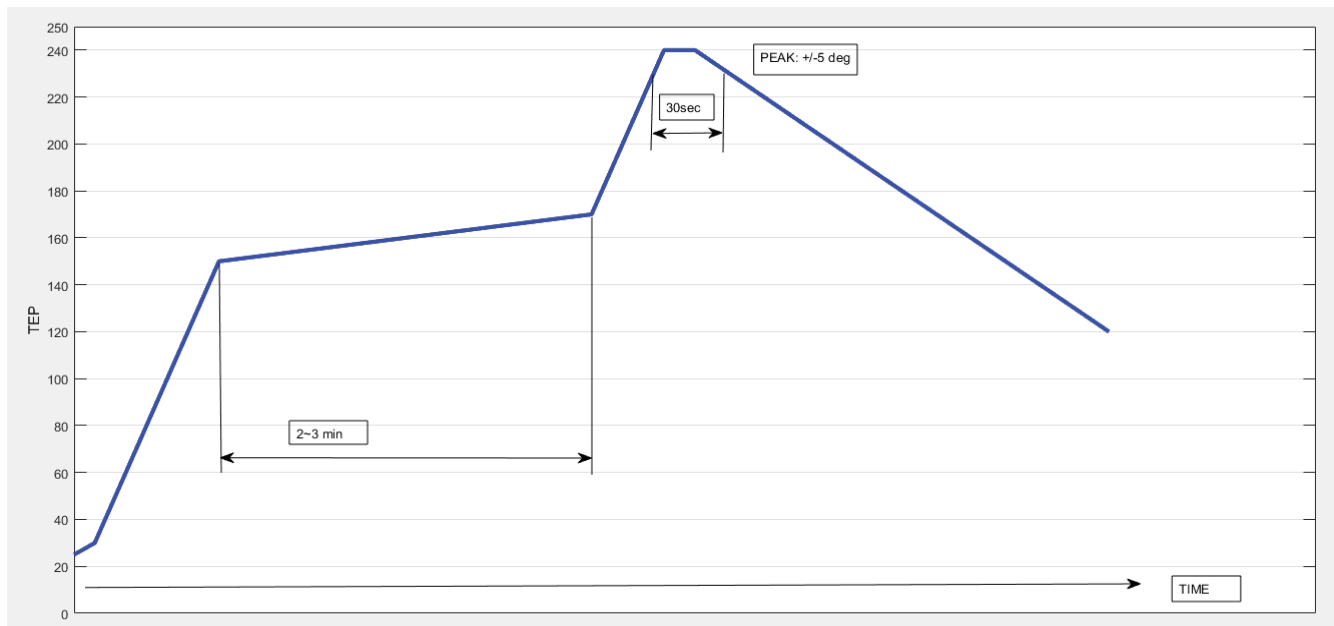


9.0 x 9.0 x 4.0mm  
RoHS/RoHS II Compliant  
MSL - 1

## Recommended Reflow Soldering Profile

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

Recommended reflow condition:



## Packaging

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

Quantity:

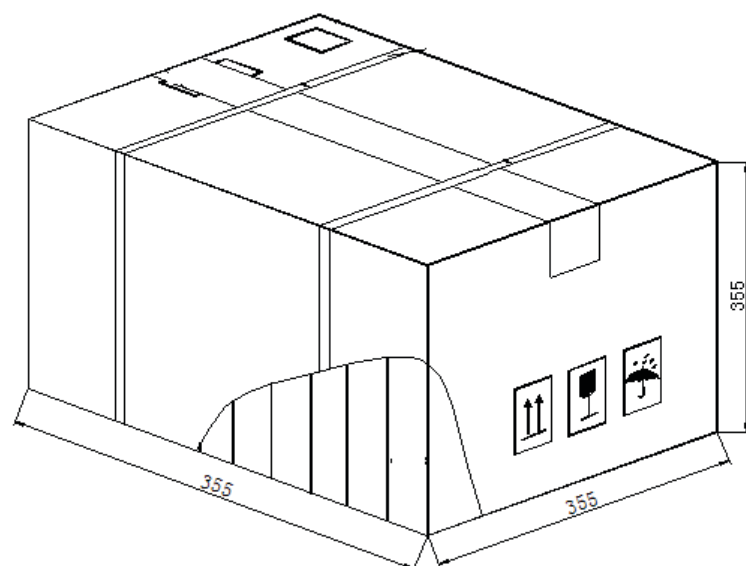
Per plastic reel: 600 pieces

Per inner box: 1 reel

Per package/carton: 10 inner boxes

Total No. of pieces/package: 6000

Package Dimensions (mm)

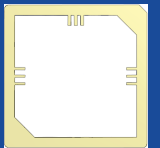


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# Compact GPS Patch Antenna



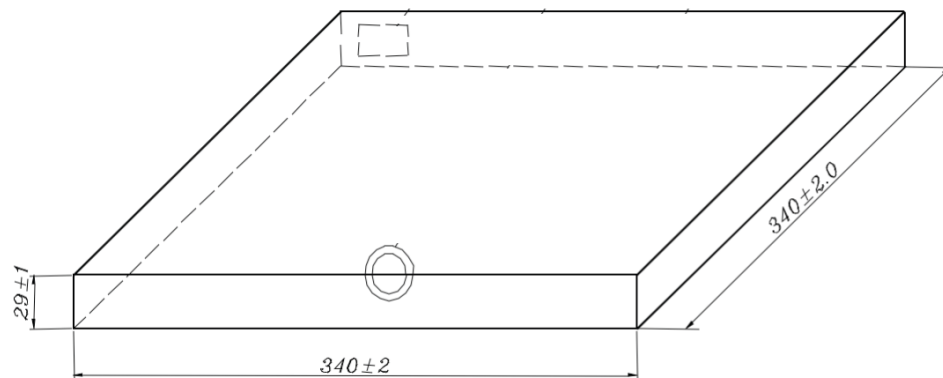
APAKN0904-S1575-T



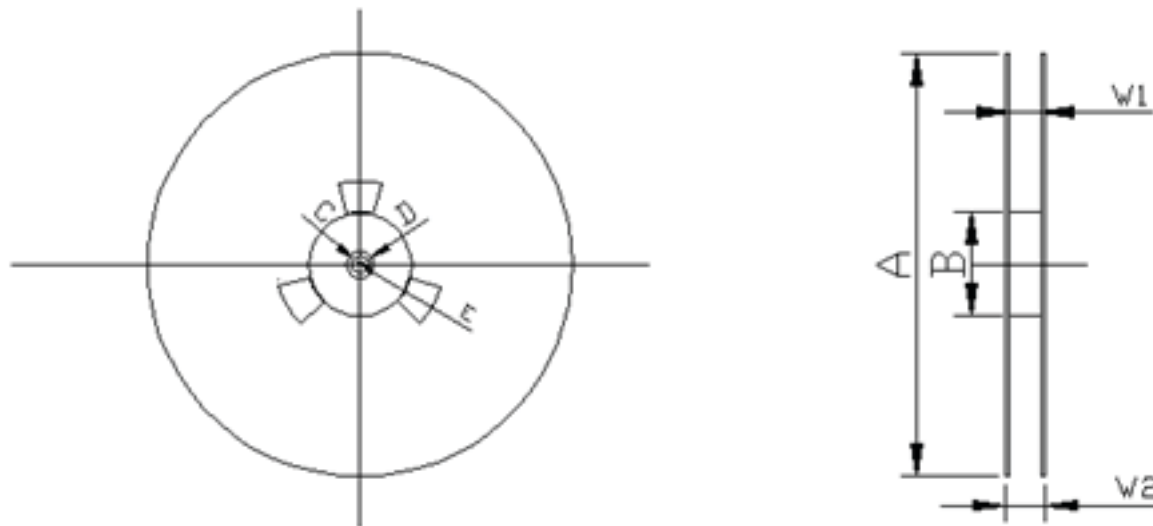
9.0 x 9.0 x 4.0mm  
 RoHS/RoHS II Compliant  
 MSL - 1

## Packaging

Inner Box Dimensions (mm)

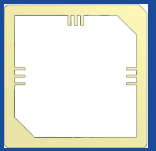


Reel Dimensions (mm)



| A      | B     | C     | D     | E    | W1   | W2   |
|--------|-------|-------|-------|------|------|------|
| ±5.0   | ±5.0  | ±5.0  | ±1.0  | ±5.0 | ±2.0 | ±3.0 |
| Φ330.0 | Φ80.0 | Φ13.5 | Φ21.0 | 2.0  | 16.4 | 22.4 |

# Compact GPS Patch Antenna



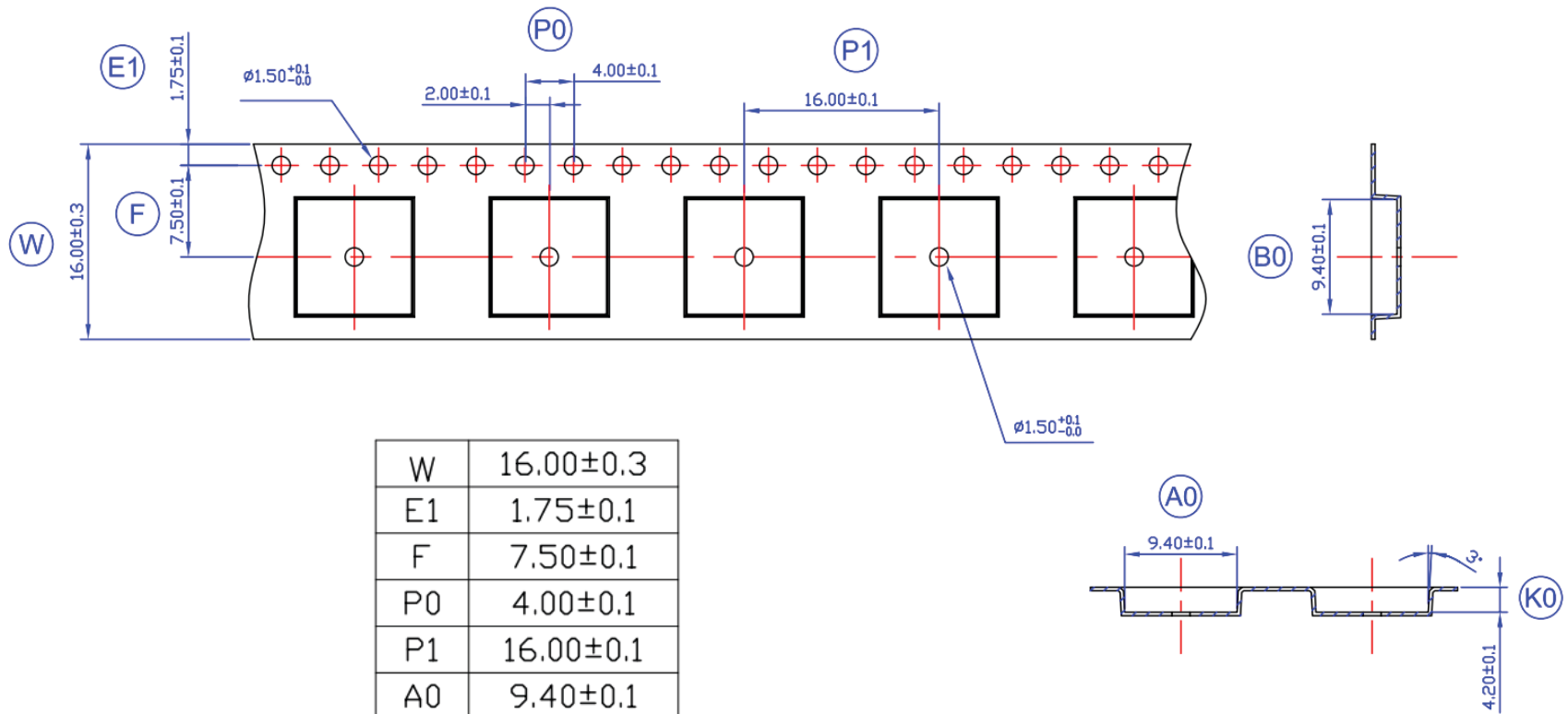
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9.0 x 9.0 x 4.0mm  
RoHS/RoHS II Compliant  
MSL - 1

## Packaging

### Carrier Tape Dimensions (mm)



|    |           |
|----|-----------|
| W  | 16.00±0.3 |
| E1 | 1.75±0.1  |
| F  | 7.50±0.1  |
| P0 | 4.00±0.1  |
| P1 | 16.00±0.1 |
| A0 | 9.40±0.1  |
| B0 | 9.40±0.1  |
| K0 | 4.20±0.1  |

### Test Condition of Peeling Strength

