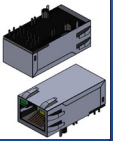


# RJ45 10G Base-T Integrated Magnetics PoE++



## ARJG111 Series

Request Samples



Check Inventory



32.5 x 16.5 x 13.5 mm  
**RoHS/RoHS II Compliant**  
MSL Level = N/A

### Features

- Integrated RJ45 connector with magnetics
- Supports 10 G Base-T Ethernet
- PoE++ as per IEEE 802.3bt
- Balanced DC line current up to 1.0A @57VDC
- 1CT:1CT isolation transformer
- Integrated termination for EMI suppression

### Applications

- Ethernet networking
- PoE++ networking
- PoE switches and access points
- IP cameras

### Electrical Specifications

| Parameters               | Minimum                         | Typical | Maximum | Units              | Notes           |
|--------------------------|---------------------------------|---------|---------|--------------------|-----------------|
| Turn Ratio ( $\pm 5\%$ ) | 1CT:1CT                         |         |         |                    |                 |
| Inductance               | 120                             |         |         | $\mu\text{H}$      | 100kHz, 0.1Vrms |
| Insertion Loss           |                                 |         | -1.0    | dB                 | 1-100MHz        |
|                          |                                 |         | -2.0    |                    | 1-100MHz        |
|                          |                                 |         | -3.0    |                    | 500MHz          |
| Return Loss              | -22.0                           |         |         | dB                 | 1-100MHz        |
|                          | $-22 + 18.27 \cdot \log(F/100)$ |         |         |                    | 100-500MHz      |
| Crosstalk                | -30                             |         |         | dB                 | 1-100MHz        |
|                          | -20                             |         |         |                    | 100-500MHz      |
| CMDR                     | -30.0                           |         |         | dB                 | 1-250MHz        |
|                          | -22.0                           |         |         |                    | 250-500MHz      |
| Hi-pot                   | 1500 Vrms min                   |         |         |                    | Pri to Sec      |
| Operating Temperature    | -40                             |         | 85      | $^{\circ}\text{C}$ |                 |
| Balanced DC Line Current | 1.0A max @57VDC continuous      |         |         |                    |                 |

\*F represents the test frequency specified in MHz

**Operating Temperature:** -40 $^{\circ}\text{C}$  to +85 $^{\circ}\text{C}$

**Storage Temperature:** -40 $^{\circ}\text{C}$  to +85 $^{\circ}\text{C}$

**Contact Abracon for more custom configurations. See options to build a custom configuration.**

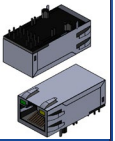


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**4/6/2026**

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# RJ45 10G Base-T Integrated Magnetics PoE++



## ARJG111 Series

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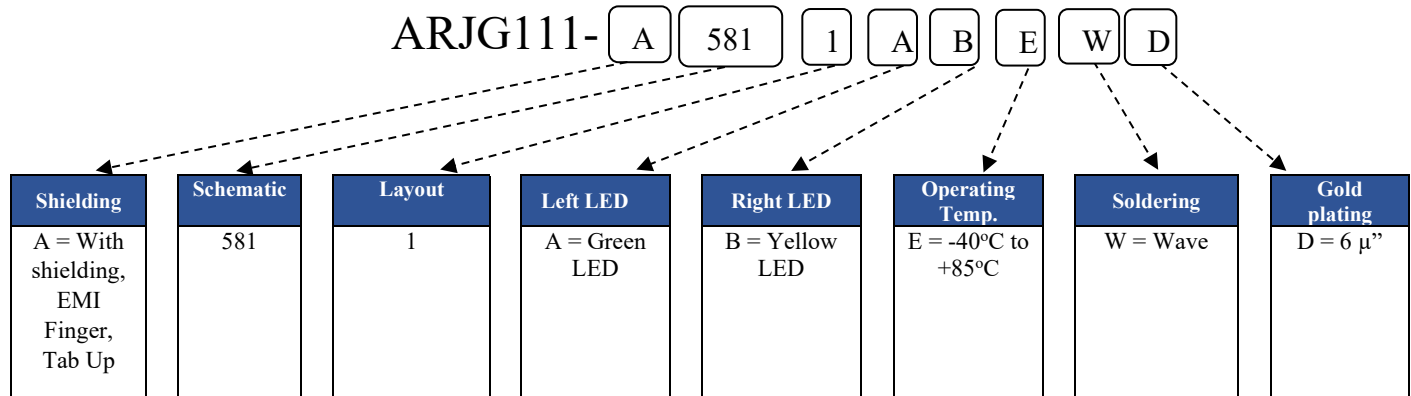


Check Inventory



32.5 x 16.5 x 13.5 mm  
**RoHS/RoHS II Compliant**  
MSL Level = N/A

### Part Identification



\*LED configurations and gold-plating options can be customized based on customer requirements.

### Materials

#### Housing Material:

Thermoplastic PBT+30%G. F UL94V-0

#### Contact Material:

Phos-Bronze C5210-EH---0.35mm Thickness

#### Contact pin Material:

MATERIAL: Brass C2680R-H, 0.35mm Thickness

Gold 6 micro-inches mi. In contact area.

#### Shielding Material:

SUS 304 1/2EH Thickness=0.2mm

**Note: No material substitutions allowed without prior approval by customers in writing**

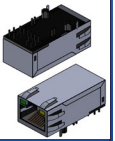


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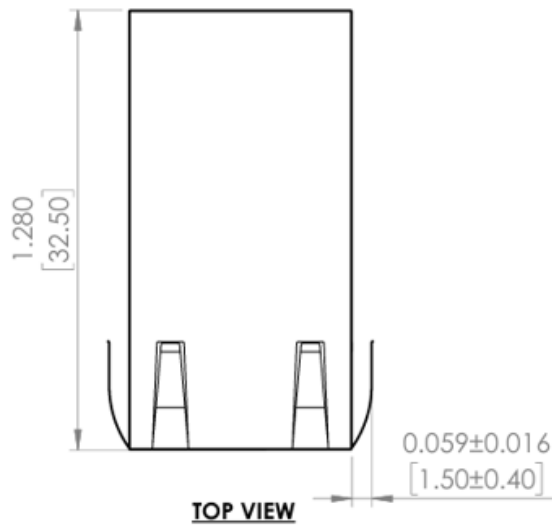
Check Inventory



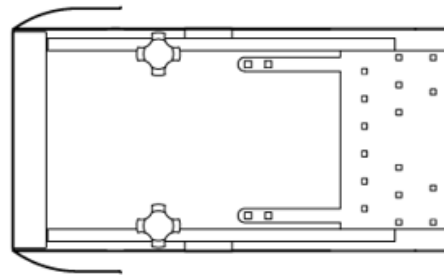
32.5 x 16.5 x 13.5 mm  
RoHS/RoHS II Compliant  
MSL Level = N/A

### Mechanical Dimensions

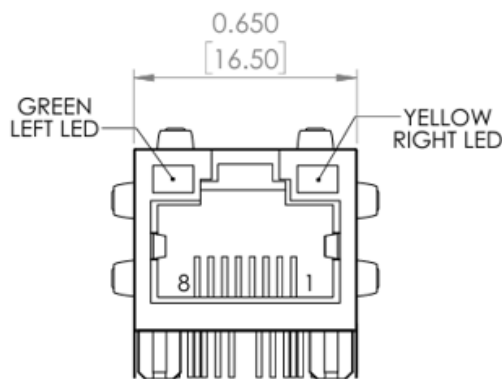
#### Layout 1:



TOP VIEW

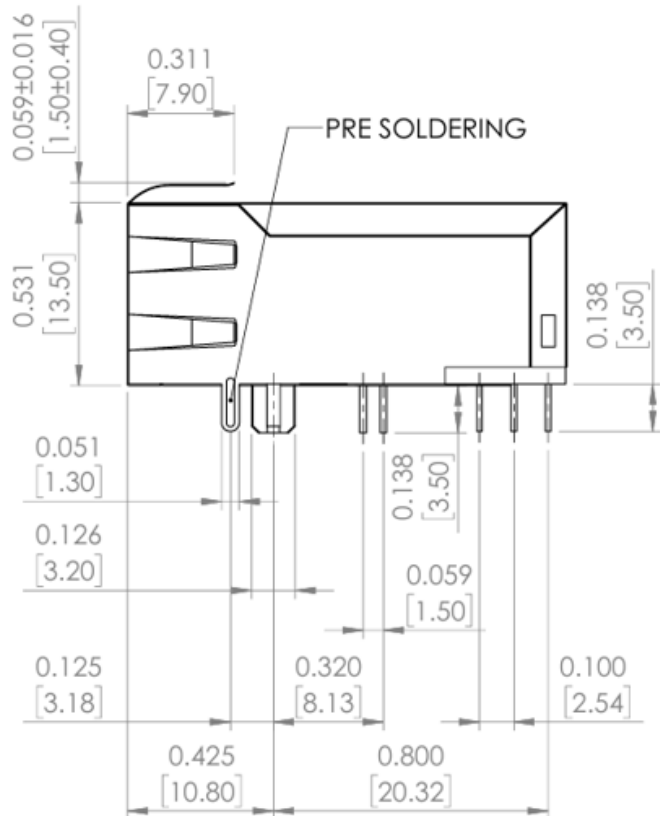


BOTTOM VIEW



FRONT VIEW

|        |       |
|--------|-------|
| X.X    | ±0.30 |
| X.XX   | ±0.25 |
| X.XXX  | ±0.05 |
| ANGLES | ±1°   |



SIDE VIEW

DIMENSIONS: INCHES[mm]

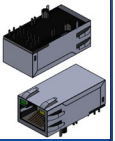


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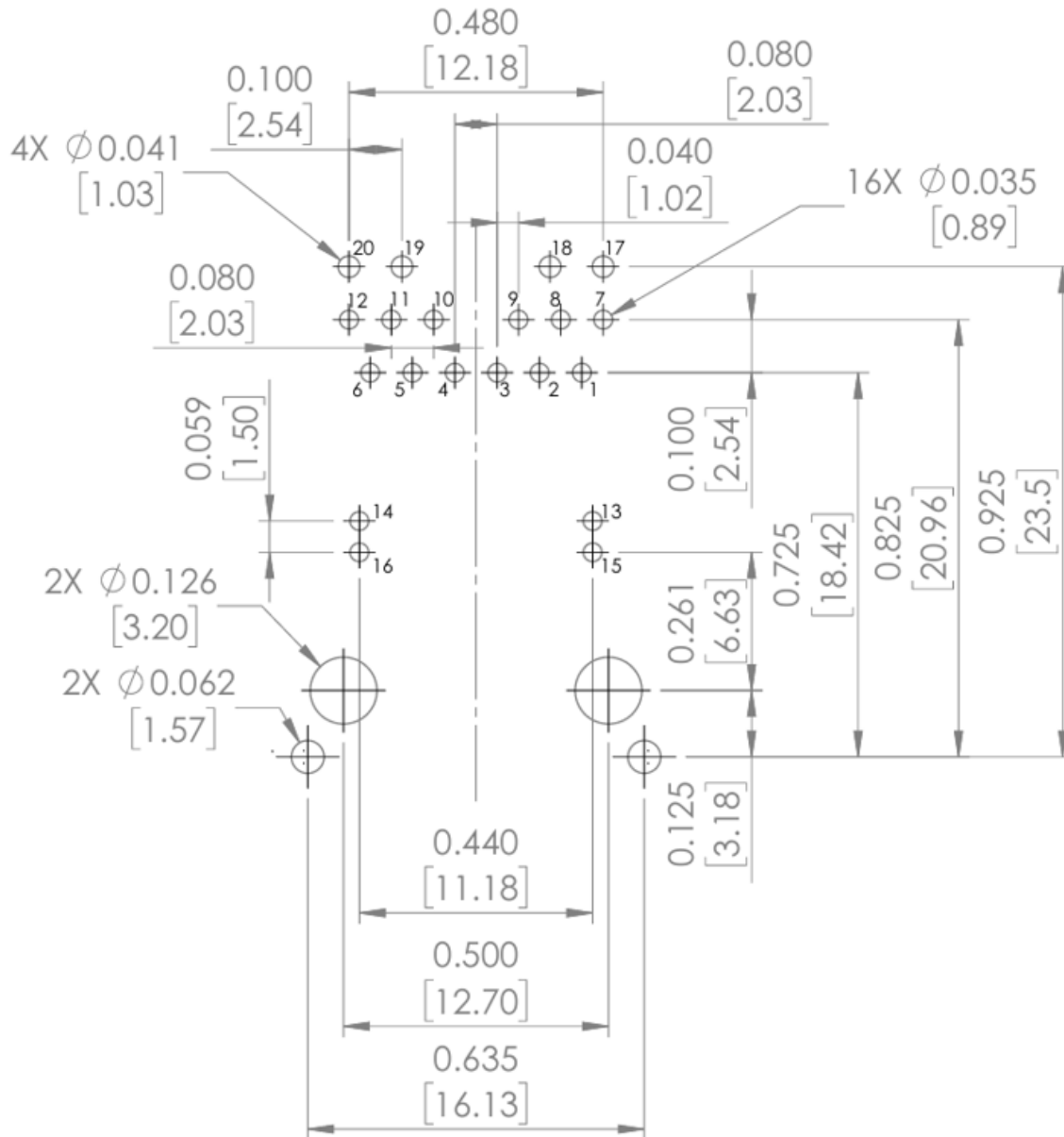
**ARJG111 Series**

Request Samples

Check Inventory

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**RoHS/RoHS II Compliant**  
MSL Level = N/A

## RECOMMENDED LAND PATTERN



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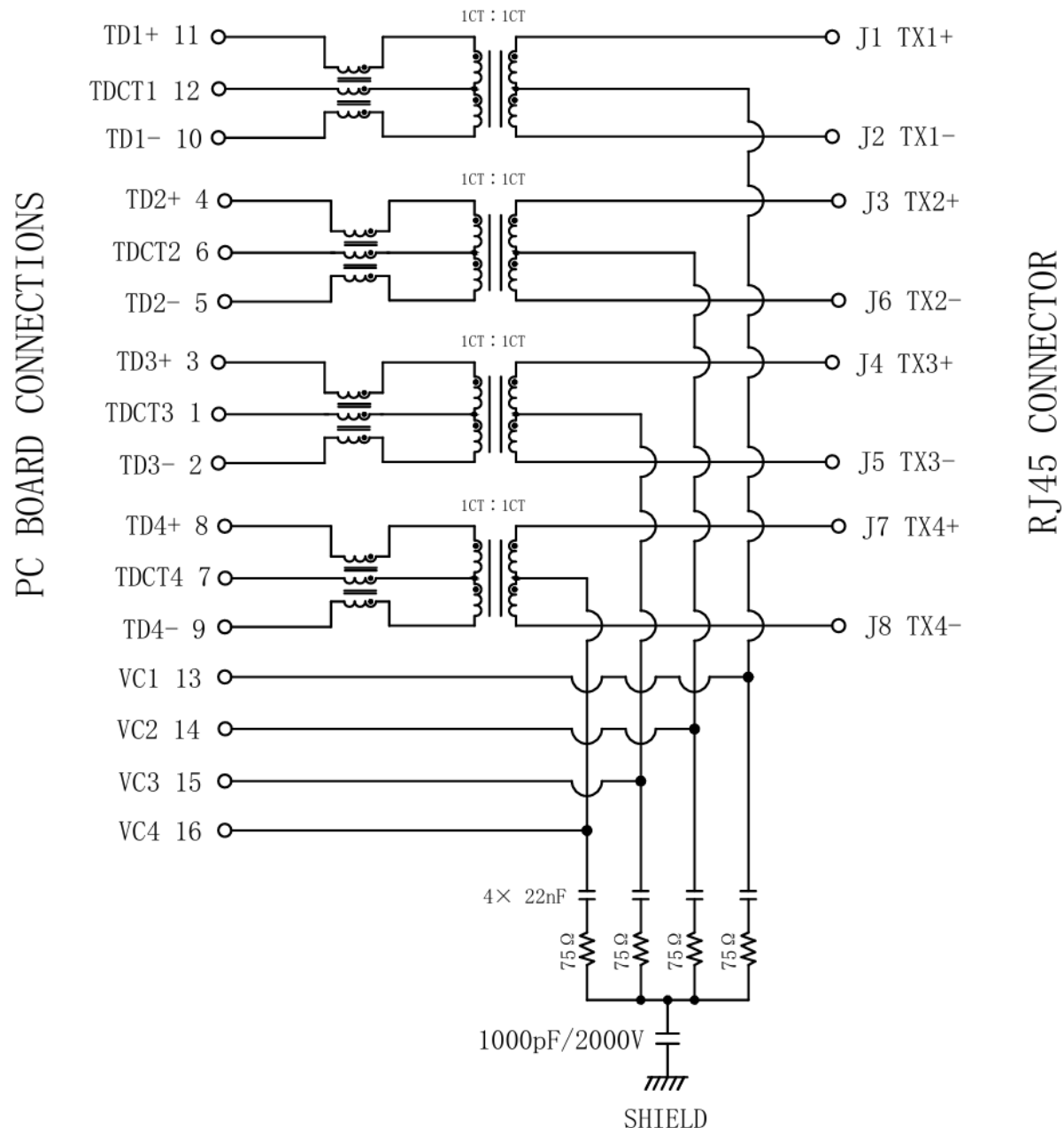
Check Inventory



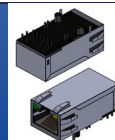
32.5 x 16.5 x 13.5 mm  
**RoHS/RoHS II Compliant**  
MSL Level = N/A

## Schematics

**581:**



# RJ45 10G Base-T Integrated Magnetics PoE++



## ARJG111 Series

Request Samples



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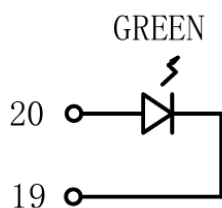


32.5 x 16.5 x 13.5 mm

RoHS/RoHS II Compliant

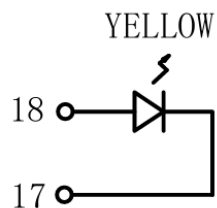
MSL Level = N/A

### LED polarity



LEFT LED

| LED POLARITY |        | COLOR |
|--------------|--------|-------|
| PIN 20       | PIN 19 |       |
| +            | -      | GREEN |

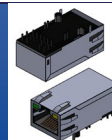


RIGHT LED

| LED POLARITY |        | COLOR  |
|--------------|--------|--------|
| PIN 18       | PIN 17 |        |
| +            | -      | YELLOW |

| Emitting Color | $\lambda_p$ (nm) | $V_F @ I_F = 20\text{mA}$ | $I_R @ V_R = 5\text{V}$ |
|----------------|------------------|---------------------------|-------------------------|
| GREEN          | 565              | 1.8~2.6V                  | 10 $\mu\text{A}$ max    |
| YELLOW         | 585              | 1.8~2.6V                  | 10 $\mu\text{A}$ max    |

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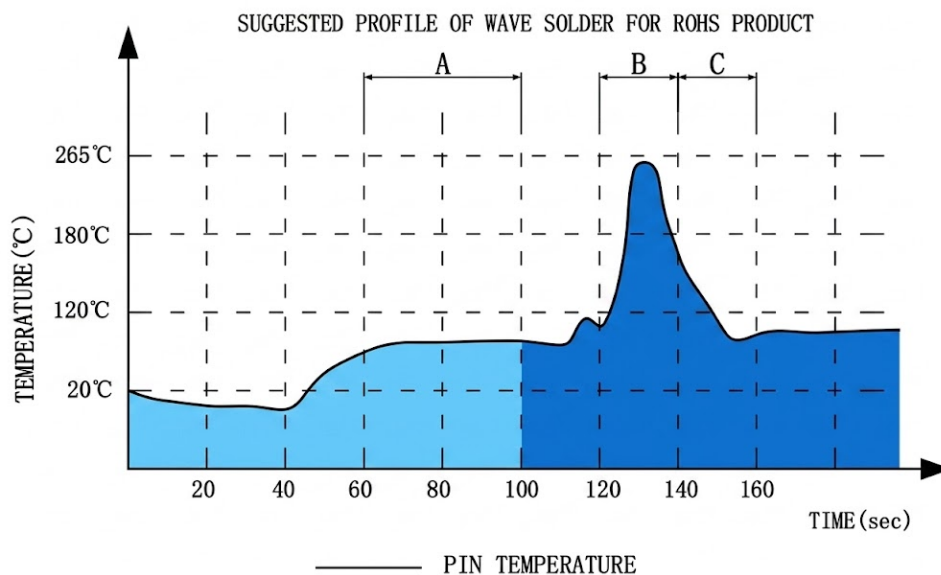


32.5 x 16.5 x 13.5 mm

RoHS/RoHS II Compliant

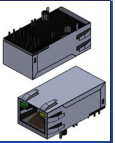
MSL Level = N/A

## Wave soldering Profile



| Zone | Description           | Temperature                              | Times        |
|------|-----------------------|------------------------------------------|--------------|
| A    | Preheat               | $T_{SMIN} \sim T_{SMAX}$<br>25°C ~ 120°C | 100 sec. MAX |
| B    | Wave Peak Temperature | $T_P$<br>250°C                           | 5 sec.       |
| C    | Cooling Rate          | $T_{COOLING}$                            | -5°C/Sec     |

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**ARJG111 Series**

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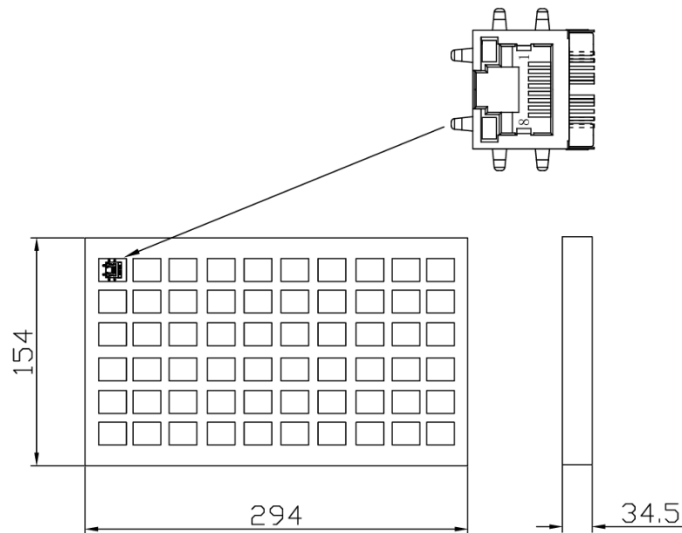
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**32.5 x 16.5 x 13.5 mm**  
**RoHS/RoHS II Compliant**  
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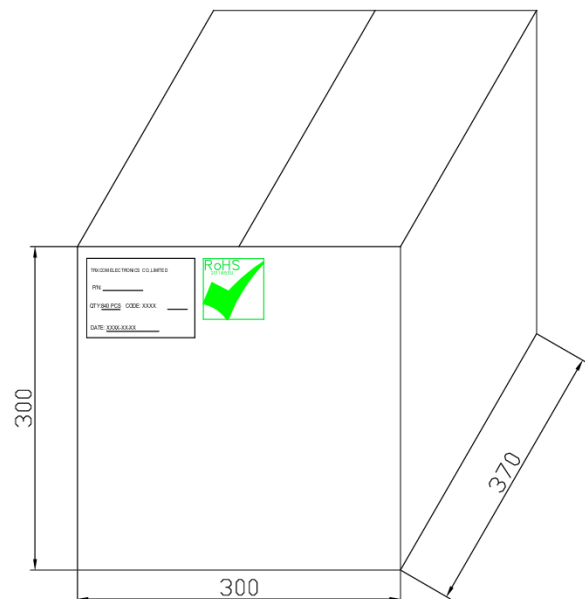
## Packing

Packing: 60pcs/tray  
Packaging material: PVC  
Carton Unit: 960Pcs/16Tray/Carton  
Gross Weight: 11KG



**Outer carton unit : 960 pcs/ 16 Trays/box**

**Dimensions: mm**



**ATTENTION:** Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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