

# RJ45 10/100/1000 Base-TX 2x1 Jack with Magnetic Module

ARJ21A

RoHS  
Compliant



17.27 x 28.40 x 25.30 mm

## FEATURES:

- Upper tab up, lower tab down
- Available with or without LED
- Suitable CAT 5 & 6 cable and UTP
- Comply IEEE 802.3ab
- LAN Magnetic with RJ45 Jack
- Suitable for RoHS compliant reflow

## APPLICATIONS:

- 10, 100 and 1000 Base-T LAN
- NIC, LoM and PC

## STANDARD SPECIFICATIONS

**Operating temperature range: 0°C to +70°C**    **Storage temperature range: -40°C to +85°C (after unpacked from the tray)**

| Part Number          | Ratio ± 5% |         | EMI<br>Fingers | LEDs<br>L/R | Insertion Loss<br>(dB Max) |         | Return Loss<br>(dB Min @100Ω±15%) |              |
|----------------------|------------|---------|----------------|-------------|----------------------------|---------|-----------------------------------|--------------|
|                      | TX         | RX      |                |             | 1 - 80 MHz                 | 100 MHz | 1- 60 MHz                         | 60 - 100 MHz |
| ARJ21A-MCSA-LU2      | 1CT:1      | 1CT:1CT | Yes            | No          | -1.0                       | -1.2    | -16                               | -12          |
| ARJ21A-MCSB-MU2      | 1CT:1CT    | 1CT:1CT | Yes            | No          | -1.0                       | -1.2    | -14                               | -10          |
| ARJ21A-MCSC-MU2      | 1CT:1CT    | 1CT:1CT | Yes            | No          | -1.0                       | -1.2    | -14                               | -10          |
| ARJ21A-MCSD-MU2      | 1CT:1CT    | 1CT:1CT | Yes            | No          | -1.0                       | -1.2    | -14                               | -10          |
| ARJ21A-MBSD-A-B-EMU2 | 1CT:1CT    | 1CT:1CT | No             | G/Y         | -1.0                       | -1.2    | -14                               | -10          |

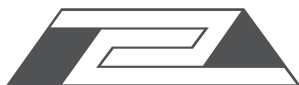
| Part Number          | Crosstalk<br>(dB TYP) | Common Mode<br>Rejection (dB TYP) | Hipot<br>(Vrms) |
|----------------------|-----------------------|-----------------------------------|-----------------|
|                      | 1 - 100 MHz           | 1 - 100 MHz                       | @ 60 Hz         |
| ARJ21A-MCSA-LT2      | -35                   | -30                               | 1500            |
| ARJ21A-MCSB-MU2      | -35                   | -30                               | 1500            |
| ARJ21A-MCSC-MU2      | -35                   | -30                               | 1500            |
| ARJ21A-MCSD-MU2      | -35                   | -30                               | 1500            |
| ARJ21A-MBSD-A-B-EMU2 | -35                   | -30                               | 1500            |

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

## OPTIONS AND PART IDENTIFICATION

ARJ21A -     -   -   -        

| Mechanical                                 | Schematic                                 | Left LED color<br>(e.g. B for Yellow,<br>AB for Green-Yellow)   | Right LED color<br>(e.g. B for Yellow,<br>AB for Green-Yellow)  | LED polarity                                             | Turns Ratio (Tx)                                                                                                 | Turns Ratio (Rx)                                                                                                 | Gold plating                                |
|--------------------------------------------|-------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| MA ~ MD<br>(Please see mechanical section) | SA ~ SQ<br>(Please see schematic section) | Blank: No LED<br>A: Green<br>B: Yellow<br>C: Amber<br>D: Orange | Blank: No LED<br>A: Green<br>B: Yellow<br>C: Amber<br>D: Orange | Blank: No LED<br>E (Please see 7.0 LED polarity section) | K: 1CT:1.41<br>L: 1CT:1<br>M: 1CT:1CT<br>N: 1.414:1CT<br>O: 1CT:1.41CT<br>P: 1:2CT<br>Q: 1:1.414CT<br>R: 1CT:2.5 | S: 1CT:1.41<br>T: 1CT:1<br>U: 1CT:1CT<br>V: 1.414:1CT<br>W: 1CT:1.41CT<br>X: 1:2CT<br>Y: 1:1.414CT<br>Z: 1CT:2.5 | 2: 6u “<br>3: 15u “<br>4: 30u “<br>5: 50u “ |



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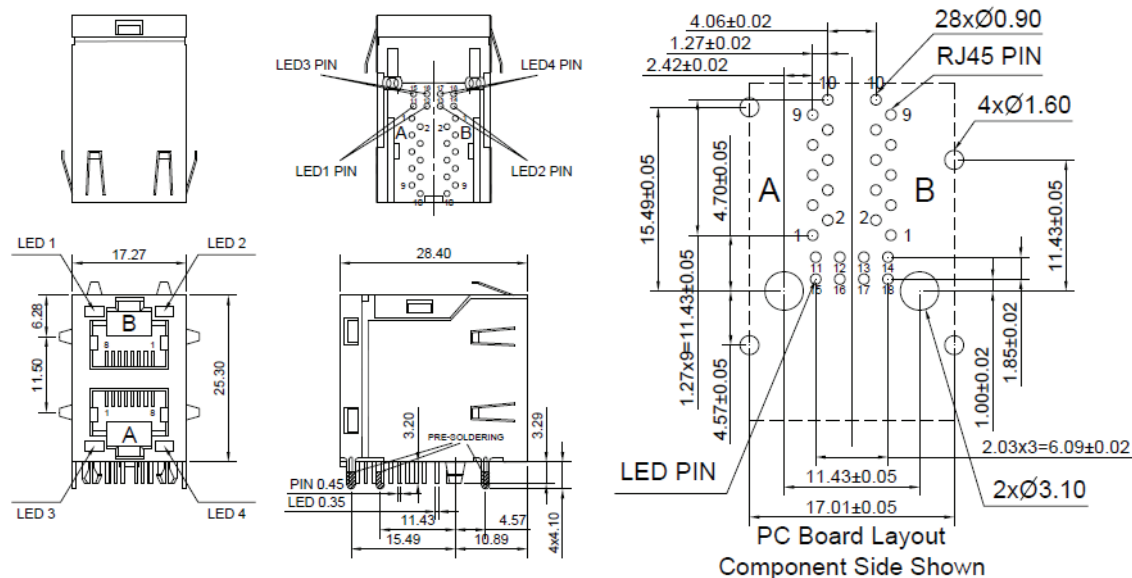
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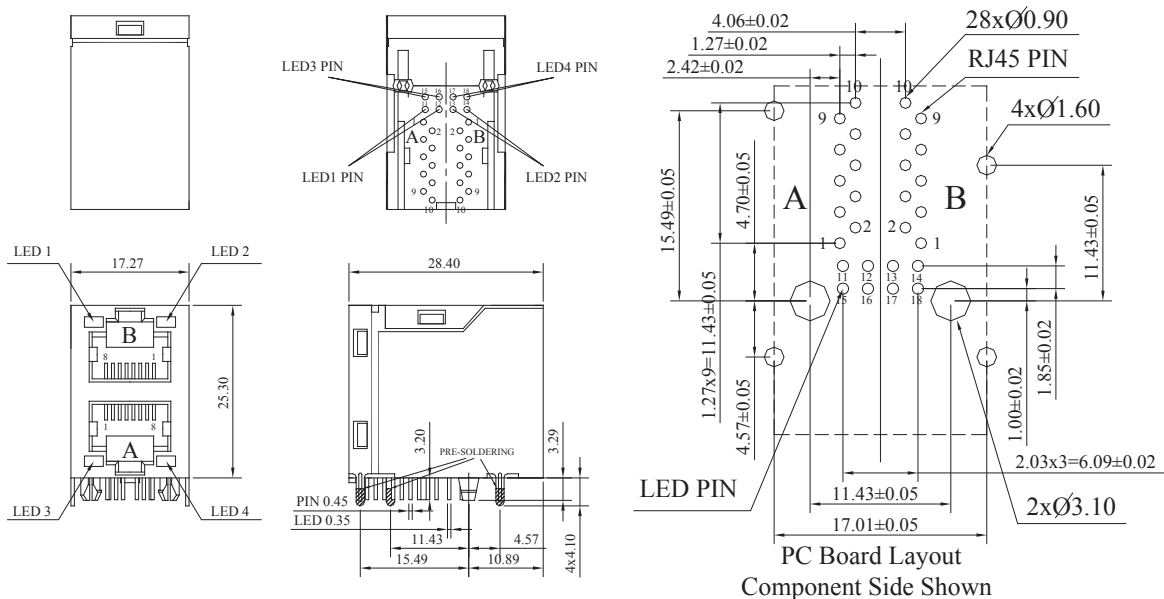
17.27 x 28.40 x 25.30 mm

## MECHANICAL DIMENSIONS

MA



MB



Dimension: mm. Tolerances: .X = ±0.38, .XX = ±0.25



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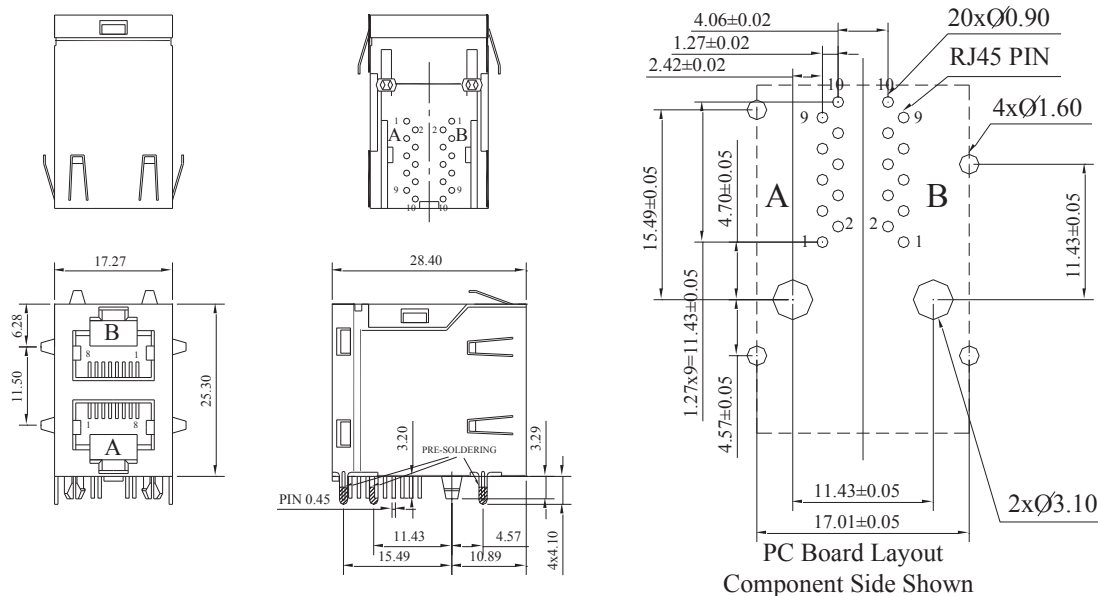
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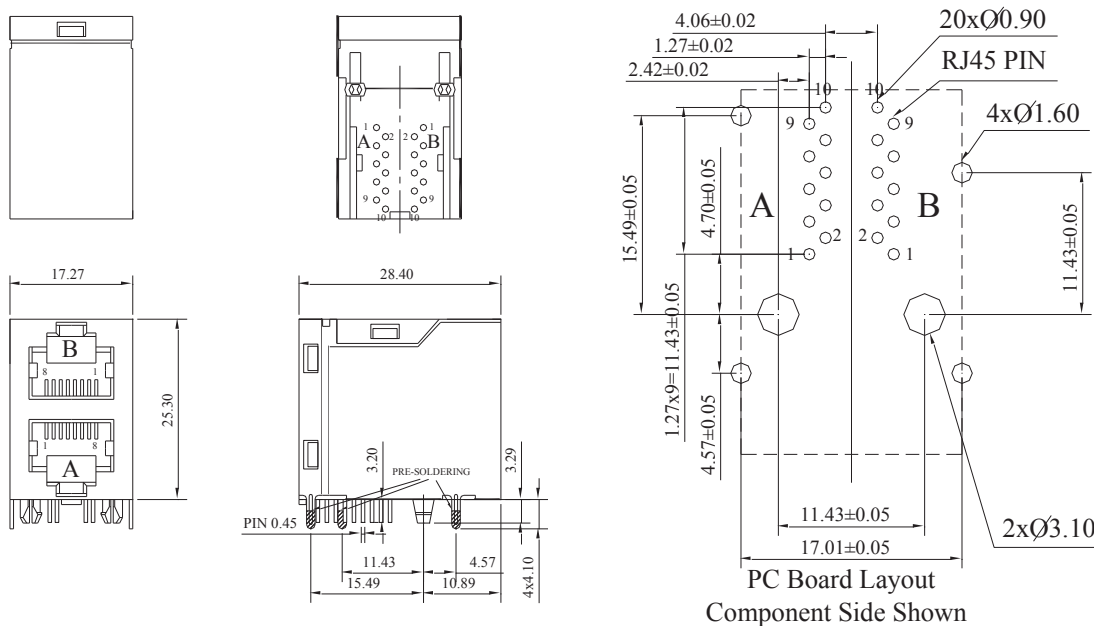
17.27 x 28.40 x 25.30 mm

## MECHANICAL DIMENSIONS

### MC



### MD



Dimension: mm. Tolerances: .X = ±0.38, .XX = ±0.25

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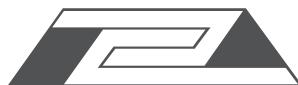
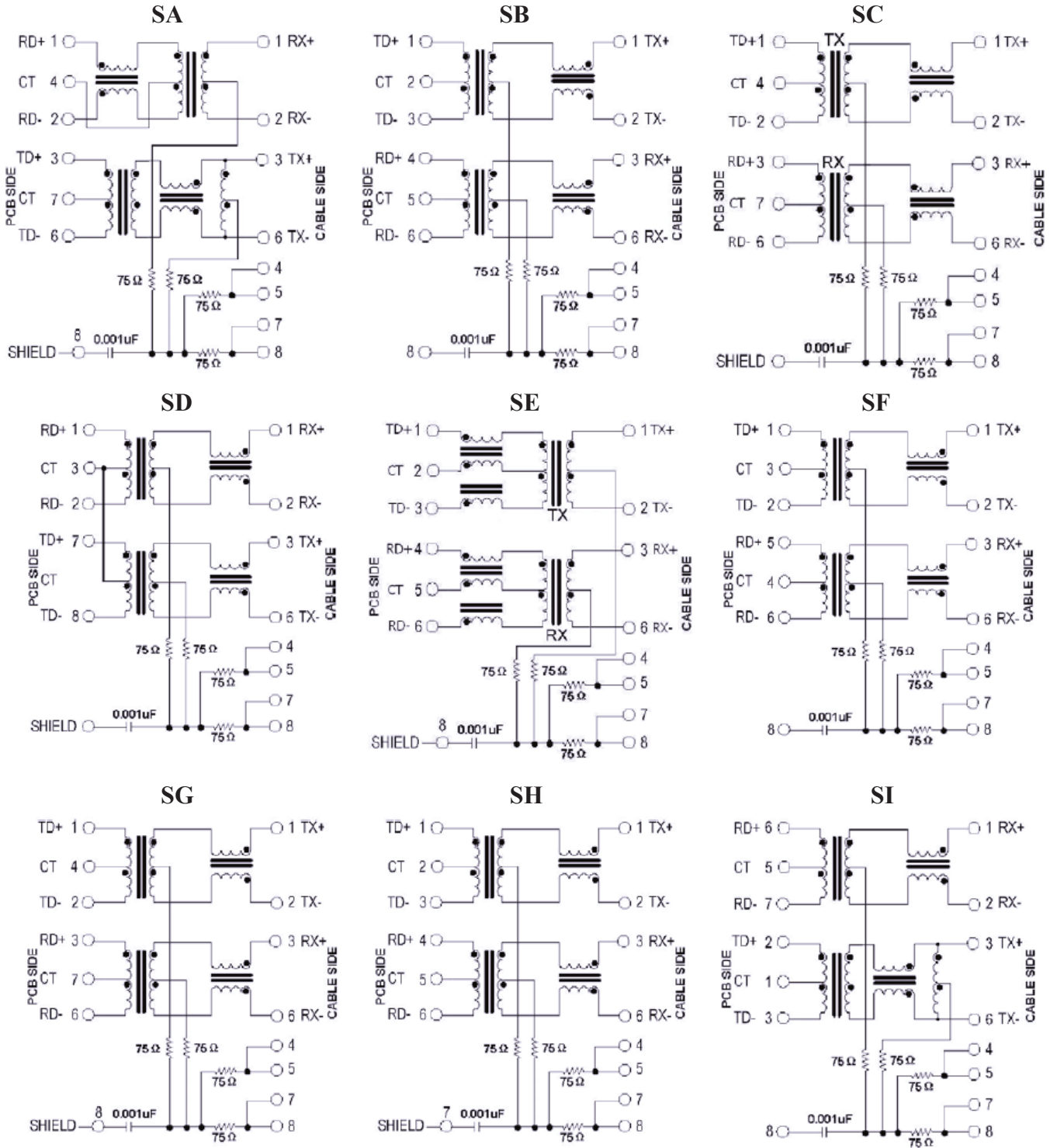
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## SCHEMATICS



# RJ45 10/100/1000 Base-TX 2x1 Jack with Magnetic Module

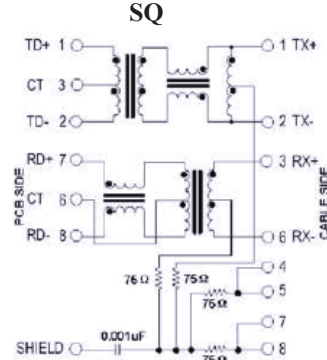
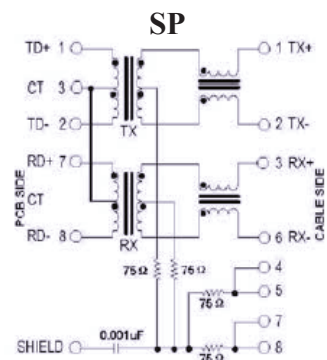
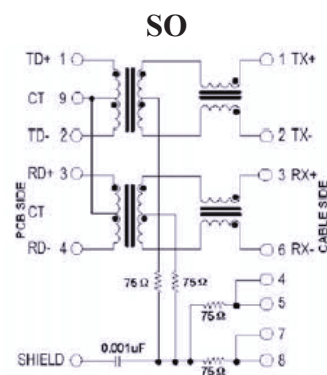
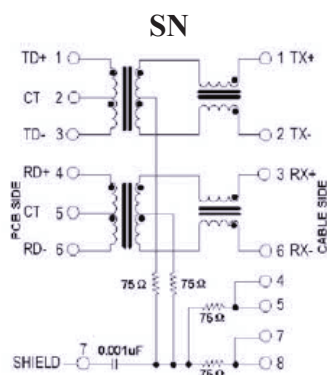
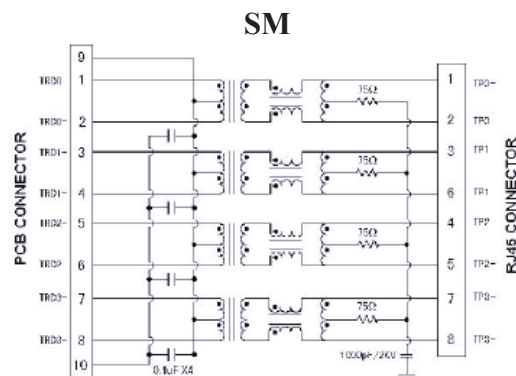
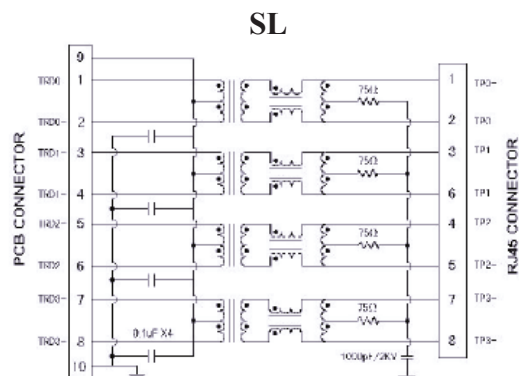
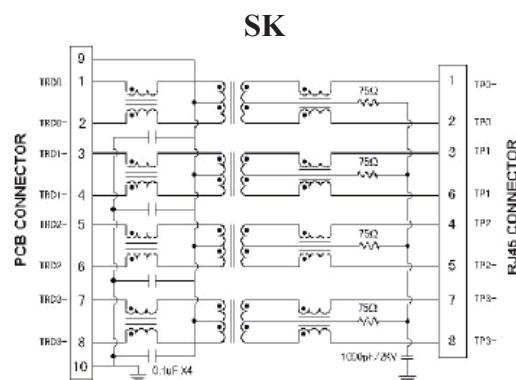
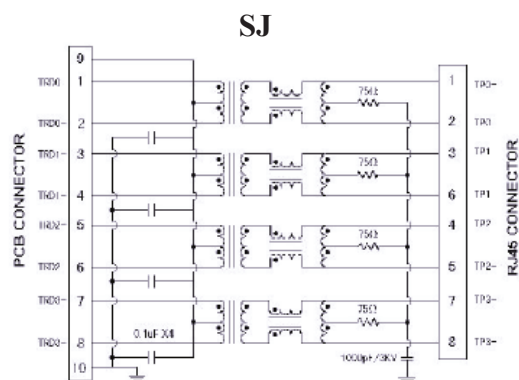
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17.27 x 28.40 x 25.30 mm

## SCHEMATICS



Note: 10/100 Base-T for Schematics SA~SI, SN~SQ; 10/100/1000 Base-T for Schematics SJ~SM.

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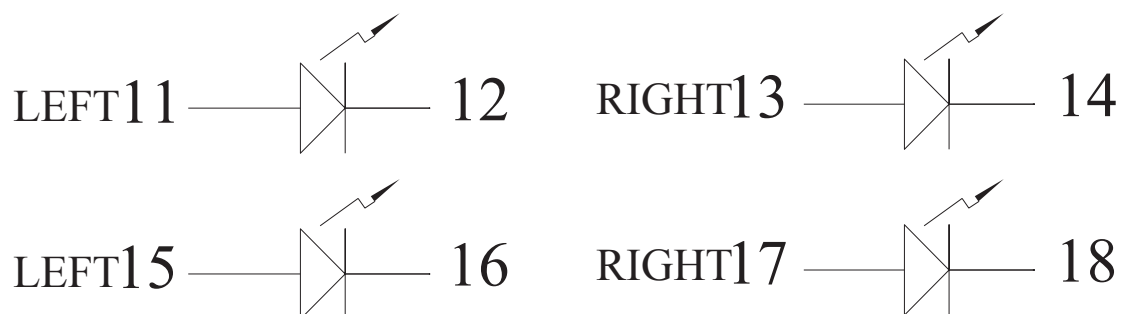
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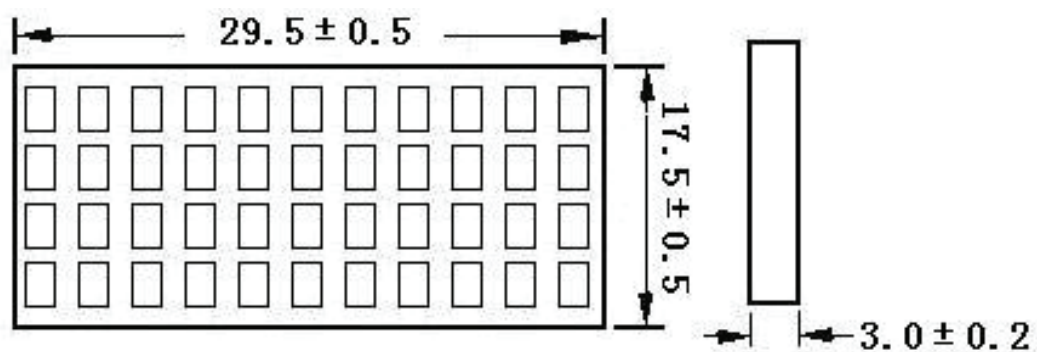
## LED POLARITY

E

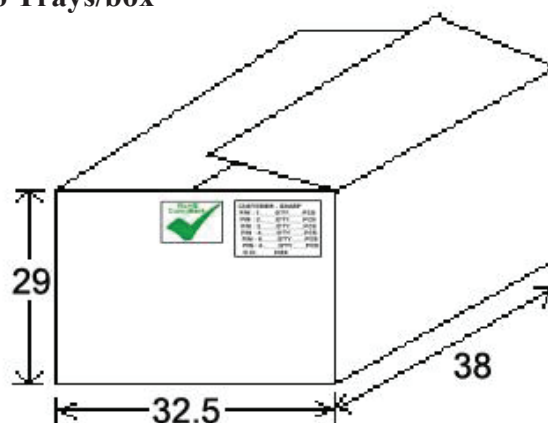


## PACKING: 44pcs/tray

Packaging material: PET



Outer carton unit : 704 pcs/ 16 Trays/box



Dimensions: cm

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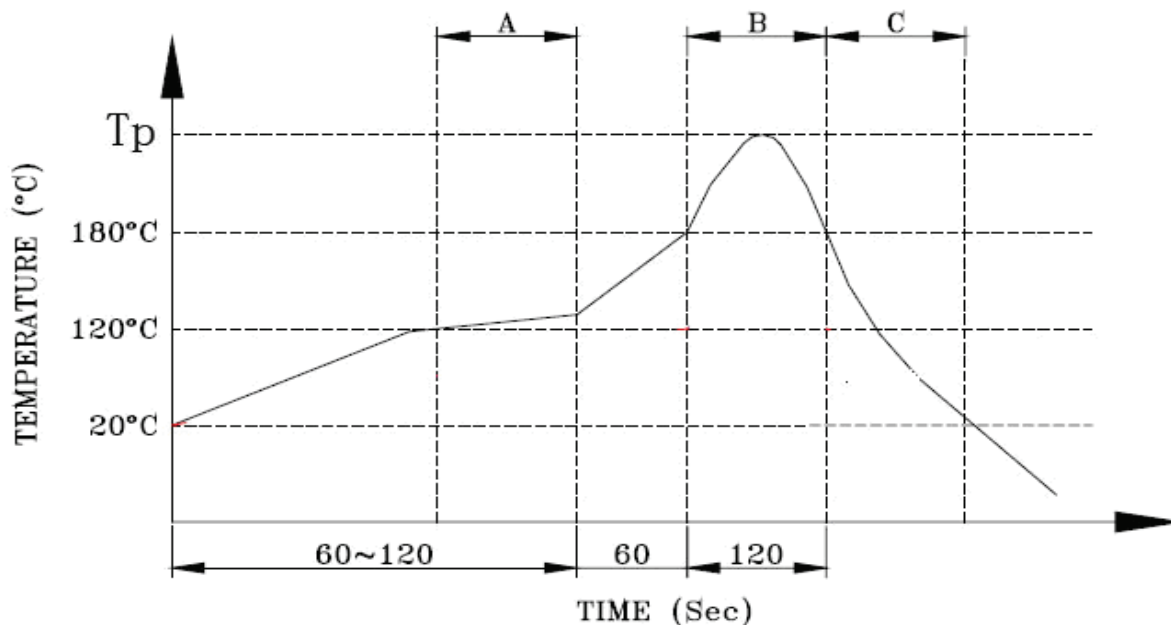
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## REFLOW PROFILE:



A. Preheating B. Soldering C. Gradual Cooling

Peak temperature( $T_p$ ) :  $250 \pm 10^\circ\text{C}$   
Peak temperature( $T_p$ ) time : 5sec max

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